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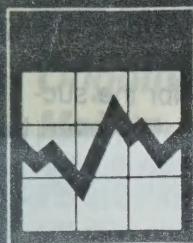
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STATISTICS CANADA

BRD Newsletter



BRD Newsletter

Business Register Division

Volume 1 No. 1

Major developmental work has been undertaken within the Business Register Division (BRD) over the past several years. As a result, there have been substantial changes in the content and range of frame support services and in the availability of data on Canadian business patterns. The intention of the BRD newsletters will be to highlight these changes and to inform Statistics Canada managers of forthcoming developments affecting the new Business Register.

The New Business Register

The Business Register is a repository of information on all employer businesses in Canada and exists for the purpose of supplying frames for all business surveys in Statistics Canada. It is designed to provide the means of integrating the coverage of surveys and of achieving consistent definitions and classification of statistical units.

The Payroll Deduction Account (PAYDAC) data from Revenue

Canada -Taxation continues to serve as the primary data source for the monthly update of business frame information maintained on the Business Register. Additional frame update information, particularly for large businesses, is derived through survey feedback and ongoing BRD frame maintenance activities. The end result has been the considerable enhancement of information available on the organizational structures of large Canadian businesses.

Net Business Formation

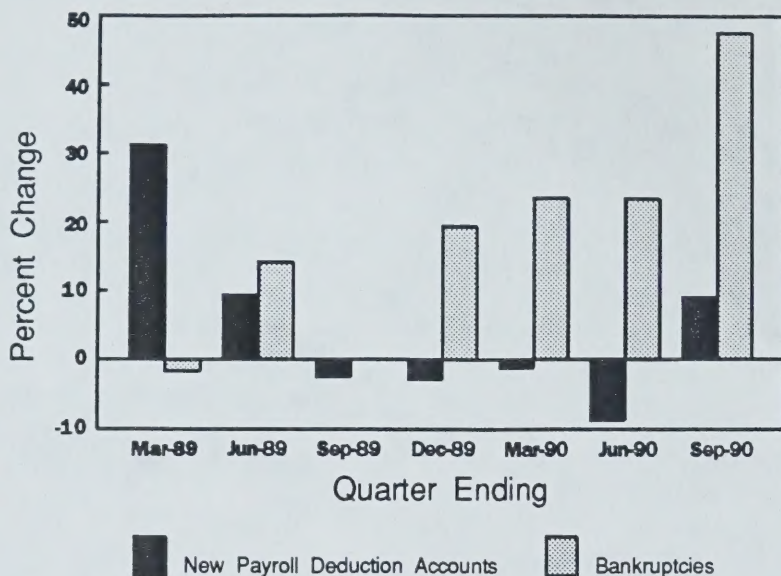
In addition to supplying survey frames, the Business Register has the capacity to provide statistics on the composition and dynamics of the Canadian business universe. Table 1 presents an annual comparison of counts of active statistical establishments by industry at the division level of the SIC. With the exception of the finance and insurance sector,

Active Statistical Establishments on the Business Register September 1990 and September 1989

INDUSTRY DIVISION	1990 (000's)	1989 (000's)	CHANGE (%)
AGRICULTURE	53.9	54.1	-0.4
FISHING & TRAPPING	5.4	5.0	8.0
LOGGING & FORESTRY	8.0	7.6	5.3
MINING, QUARRYING, & OIL WELLS	6.3	6.3	0.0
MANUFACTURING	57.8	55.0	5.1
CONSTRUCTION	108.7	102.5	6.0
TRANSPORTATION & STORAGE	31.3	29.6	5.7
COMMUNICATIONS & OTHER UTILITIES	5.2	4.9	6.1
WHOLESALE	56.7	54.1	4.8
RETAIL	148.8	144.8	2.8
FINANCE & INSURANCE	26.5	22.7	16.7
REAL ESTATE & INSURANCE AGENTS	34.7	33.1	4.8
BUSINESS SERVICES	71.9	65.6	9.6
GOVERNMENT SERVICES	9.7	9.6	1.0
EDUCATION SERVICES	7.1	6.7	6.0
HEALTH & SOCIAL SERVICES	57.6	55.1	4.5
ACCOMMODATION, FOOD & BEVERAGE SERVICES	53.6	56.0	-4.3
OTHER SERVICES	97.9	97.5	0.4
TOTAL	841.1	810.2	3.8

TABLE 1





Sources: Business Register, and Insolvency Bulletin Consumer & Corporate Affairs

FIGURE 1 New Payroll Deduction Accounts and Bankruptcies, Annual % Change by Quarter

the year-to-year percentage changes observed across industries are relatively small. These percentage changes which represent the net effect of business formation and dissolution, understate considerably the changing composition of the business population.

To illustrate this, one might consider new Payroll Deduction (PD) accounts as an indication of new business formation. A PD account is recognized as a new business when it first exhibits employment activity. In the 1989 period, there were 145,423 new PD accounts. These new business entries represent 17 per cent gross change in the composition of the 1989 statistical establishment count.

The counts for the deletion of statistical establishments are currently unavailable. The timely tabulation of business exits is difficult to achieve. This is due to the considerable time lags associated with the recording of deaths on the Business Register. For example, the ownership of a manufacturing plant might shut down operations as of January, but may not notify RC-T of PD account termination until July. Alternatively, the business bankruptcies data series might be referenced as a timely indicator of business closures.

Figure 1 presents the annual percentage change by quarter of new PD accounts as compared to the business bankruptcies in Canada. With the exception of the March 1989

quarter, the percentage change in new PD accounts remains relatively stable for the successive quarters. However, the percentage change in bankruptcies increases quite dramatically beginning with the fourth quarter of 1989.

Current Business Register Users

A considerable number of information requests have been serviced with data recorded on the Business Register. As well, the Monthly Wholesale and Retail Trade Surveys and the Survey of Employment, Payrolls and Hours use the Business Register as their frame. Several other areas within Statistics Canada have taken advantage of the data on the Business Register. They include :

- Environment and Natural Resources Group
- Input-Output Division
- International Trade Division
- Small Business Division
- Regional Offices.

External data requests for Business Register data have come from both Federal and Provincial government departments and private industry. In particular, all provincial Focal Points have been provided selected Business Register micro data.

Ongoing Frame Maintenance Activities

Clerical processing within the BRD completed 15,000 to 20,000 work units¹ per month over the course of the last quarter. Over the same period, the outstanding in-process work units remained in the order of 1,000 to 2,000 per month.

Other current processing activities include the frame reconciliation necessary for the 'hook-up' of the Annual Surveys of Manufacturing, Construction, Transportation, several Service sectors and Wholesale/Retail Trade.

The annual review of the Book of Estimates (1990-91) is under way. This process will update the federal and provincial government units on the Business Register. It should be noted that government lists updated for the 1989-90 period are currently available from the Business Register.

From the sampling and transcription operations conducted for the BRD's Tax Estimates Program, a Master Sample of 220,000 business entities has been generated for Tax Year 1988. This Master Sample has

the capability of serving as the frame for annual surveys of economic production. As the tax estimates cover both incorporated and self-employed businesses, these data may be used to support other analytical programs within Statistics Canada.

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1. A work unit is a set of tasks assigned to an individual for the purpose of maintaining a business structure.
-

Future Analytical Development

Within the next several months the BRD plans to undertake analytical studies dealing with :

1. The development of a data series on the entries and exits to the statistical establishment universe, possibly to be released on a quarterly basis;
2. The analysis of the distribution of business and statistical entities by size and geographic characteristics within industry.

In the next issue ...

In addition to highlighting further Business Register developments, the next issue of the BRD Newsletter will present data comparing business patterns and population demographics on a geographical basis.

For additional information concerning the Business Register or the Tax Estimates Program, please contact any one of the following:

- ☛ Kitty Stevens
(general data dissemination)
951-9021
- ☛ Des Beckstead
(Business Register population analysis)
951-3463
- ☛ Jean Leduc
(tax estimates)
951-0110
- ☛ Bill Penner
(Product Analysis and Dissemination Section)
951-0389



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BRD Newsletter

Business Register Division

Volume 2 No. 1

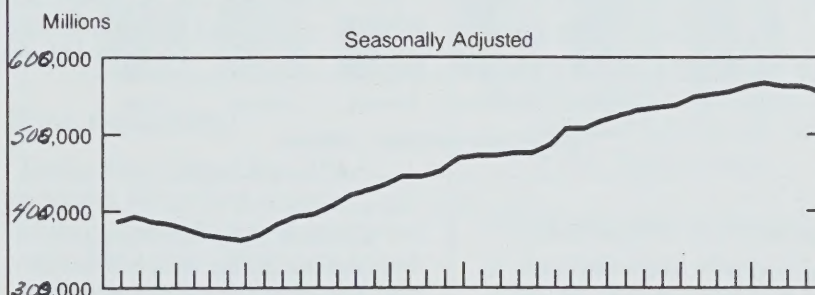
Business Formation Trends

As recently mentioned in the *Canadian Economic Observer* (Feb. 1991) a growing number of parallels are evident between the current recession and that of 1981-82. An analysis of the business formation (new payroll deduction accounts) and the bankruptcies trends would generally support this observation although certain differences are discernable.

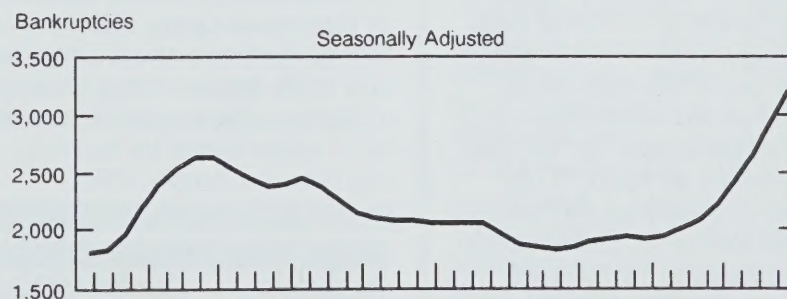
During the 1981-82 recession, the onset of significant changes in both of these trends slightly preceded movements in the GDP trend. For instance, business bankruptcies started to increase significantly in the second quarter of 1982, reaching their apex a full quarter before the height of the recession. Similarly, new payroll deduction accounts declined consecutively until the third quarter of 1982 before turning around again a full quarter before the upturn in GDP.

While business formation and bankruptcies trends began to deteriorate in advance of the

GDP at 1986 Prices

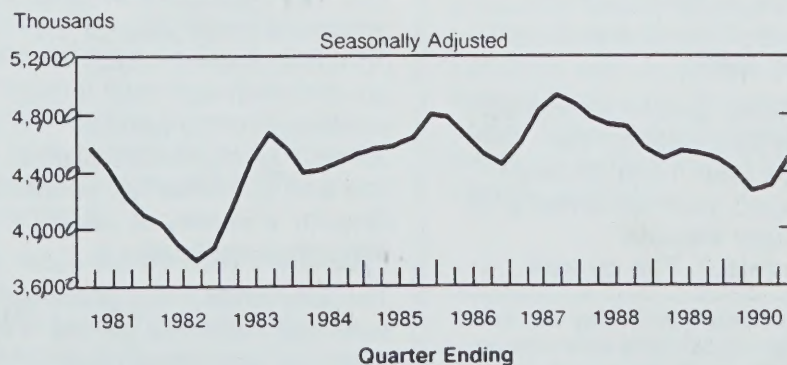


Business Bankruptcies



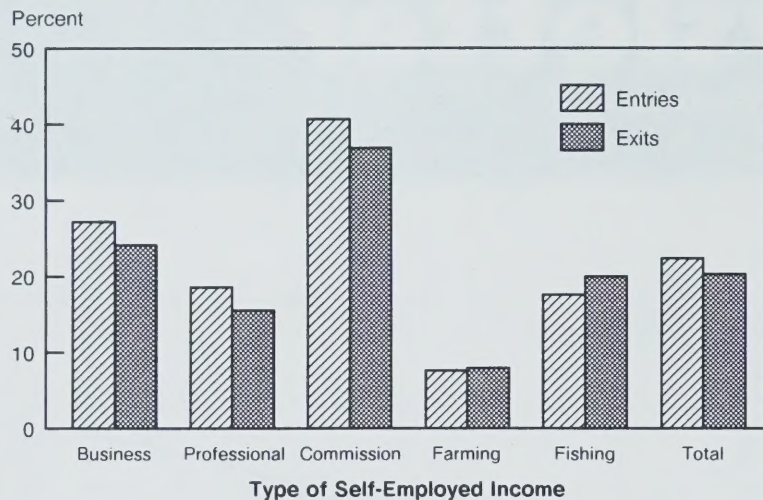
Source: *Insolvency Bulletin*, Consumer & Corporate Affairs

New Payroll Deduction Accounts



Entries and Exits of Self-Employed Income Earners

Percentage Change - 1988 to 1989



current economic downturn, these changes become evident at a much earlier stage. Bankruptcies increased as early as the last quarter of 1987, with a dramatic upward acceleration in the trend after the first quarter of 1989. New payroll deduction accounts have declined since late 1987, with a small upturn for the last two quarters of 1990. This decline in business formations is certainly not as pronounced as experienced in 1981-82. With interest rates approaching 20% during the earlier recession, they probably presented a much greater obstacle to new business start-ups than do the current interest levels.

The above graph depicts the entries and exits for the taxation year 1989, of self-employed income earners by five major income categories.¹ The overall

numbers are quite high, averaging 20%, while the net change is approximately 2%. As expected, the levels are higher for forms of self-employment with lower entry or formation costs. For example, the levels of entries and exits for the commission income category are close to 40% while those for farming income are below 10%.

Tax Estimates Program

The Tax Estimates Program produces estimates for the portion of the business universe not included in the coverage of the annual surveys of economic production and provides tax sourced data for a variety of other statistical applications.

The fully-edited, weighted tax estimate data files for the 1988 tax year have been available to all survey programs since the early fall

of 1990. Several areas currently use the tax estimates data within their statistical programs:

- Census of Construction (Industry Division)
- Annual Retail Trade (Industry Division)
- Annual Wholesale Trade (Industry Division)
- Census of Manufactures (Industry Division)
- Transportation Division
- Annual Surveys of Services Industry
- Small Business and Special Surveys Division
- Industrial Organization and Finance Division.

The Business Register Division has been using tax data for statistical purposes since 1973. In its 18 years of existence, the Division has accumulated extensive historical information on businesses through its access to incorporated and unincorporated tax files.

Tax Estimates Coverage

Tax Estimates are derived for all businesses with an annual Gross Business Income (GBI) greater than or equal to \$25,000 and less than the GBI thresholds established for the Integrated Portion (IP)² of the Central Frame Data Base (CFDB). The GBI thresholds defining the lower boundary of IP vary by industry and province (available on request). To delineate the universe of tax records, an exclusion list containing all IP size businesses is forwarded to Revenue Canada at the start of each of tax year.

¹ Self-employment activity can be described as a non-zero value in one or more fields used in the Self-employment income part of Revenue Canada T1 Tax Return.

² The IP segment of the CFDB includes larger businesses which are to be directly surveyed by the surveys of economic production.

Data Sources

The source documents used in the compilation of tax estimates are the T2 Corporate returns and the T1 Individual returns (self-employed filers). Of the 800,000 corporations in the T2 universe, approximately 500,000 are in scope for the tax estimates sample. Every year a sample of over 100,000 corporations is selected.

The T1 universe is comprised of over 1,000,000 taxfilers (businesses and professionals) and approximately 570,000 are in scope for the tax estimates sample. A sample of 70,000 T1 filers is extracted each year.

Information for the program is largely extracted from the financial statements (income and expense statement, balance sheet...) attached to sampled returns. The major items can be categorized as follows:

- Identification – name, address, SIC-80 and Account number
- Balance Sheet – for a sub-sample of 16,000 corporations, a substantial number of fields are captured (e.g. assets, liabilities, retained earnings...)
- Income and Expenses – for all 170,000 sampled records, the major items captured are sales (products and services), commission income, rental income, etc...
- Sources and Applications of Funds – every two years, a special transcript is processed for Small Business and Special

Surveys Division from a sub-sample of 30,000 records.

Sampling method

The tax sampling system was redesigned to meet new requirements arising from the Business Surveys Redesign Project. The sampling strategy involves a two-phase design to improve the quality of the estimates. This new sample design has been fully implemented for the tax year 1989.

Data Availability

Users can obtain tax data from the BRD in the format of printouts which present the estimates and associated coefficients of variation (CVs) at various SIC levels of aggregations by province by selected variables. It can also be provided on a machine-readable file or access can be provided to micro data using machine-readable files.

Access to Taxation Data

Since the data is based on information derived from income tax forms, maintaining data confidentiality is vital. However, to support survey activities and the publication of aggregated data, access to the tax data is generally approved.

All requests by user divisions for access to micro tax data requires authorization by the Director of Business Register Division. The first step is to

discuss with the coordinator of the Tax Estimates Program whether a statistical application could effectively use the tax data and whether circumstances exist which would restrict access. If an application is considered viable, a formal request should be initiated by your Director (or equivalent). It should include

- a complete description of the data required;
- a description of the intended use of tax data;
- the names of the persons responsible for all aspects of the data usage.

Other tax data sources

In addition to tax estimates data, two other tax data files are available for analysis or data linkage.

The Personal Master File contains a record for each individual who filed a T1 return for a given tax year. The data content is all numbered cells on the four pages of the T1 return plus a selection of other fields from the associated schedules. A historical series from 1970 to 1989 is available.

The T4 Files (Summary and Supplementary) contain employer based data and provide information on total earnings and deductions by Payroll Deduction account or Social Insurance Number. A historical series from 1978 to 1989 is available.

For more information
concerning the Tax
Estimates Program, contact:

☎ Mary Lynn Carruthers
Analyst
Tax Estimates
951-9041

☎ Jean Leduc
Coordinator
Tax Estimates
951-9046

☎ Bill Penner
Chief, Product
Analysis and
Dissemination Section
951-0801

CFDB Browse Access

It has recently become possible to access the CFDB Browse facility through a Local Area Network (LAN). For technical and access authorization details call Alain Chamberland at 951-9020.

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BRD Newsletter

Business Register Division

Volume 2. No. 2

December 1991

The Business Register

The Business Register (BR) is a repository of information on all employer businesses in Canada and exists for the purpose of supplying frames for all business surveys in Statistics Canada. It is designed to provide the means of integrating the coverage of surveys and of achieving consistent definitions and classification of statistical units.

Net Business Formation

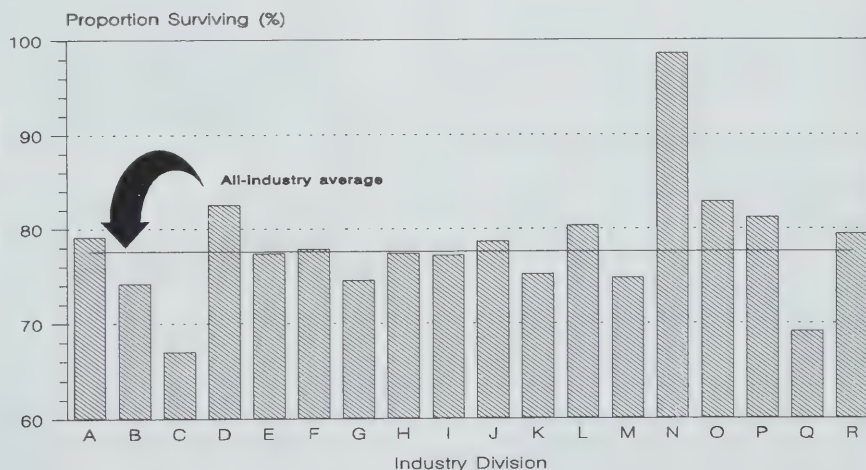
In addition to supplying survey frames, the Business Register can be utilized as a source of statistics on the demographics of Canadian businesses.

Table 1. presents an annual comparison of the stock of active statistical establishments for each Industry Division. Over the year ending September 30, 1991 there was an overall increase of 6.4% in the number of active statistical establishments recorded on the Business Register. The changes ranged from an increase of 15.7% in the Accommodation, Food and Beverage Service Industries to a decrease of 2.6% in the Government Service Industries.

Table 1.
Active Statistical Establishments on the Business Register
September 1990 and September 1991

Industry Division	000's	September 1990	September 1991	Net Change (%)
A - Agriculture		53.7	54.2	0.92
B - Fishing and Trapping		5.4	5.9	10.22
C - Logging and Forestry		7.9	8.5	6.84
D - Mining, Quarrying and Oil Wells		6.2	6.3	1.11
E - Manufacturing		56.4	58.9	4.41
F - Construction		107.8	111.7	3.55
G - Transportation and Storage		30.8	33.2	8.03
H - Communication and Other Utilities		5.1	5.4	5.90
I - Wholesale Trade		55.8	60.1	7.56
J - Retail Trade		146.9	152.8	4.05
K - Finance and Insurance		25.3	27.5	8.86
L - Real Estate Operators and Insurance Agents		34.1	35.8	5.08
M - Business Services		70.5	77.2	9.48
N - Government Services		9.7	9.4	-2.56
O - Education Services		6.8	7.4	8.00
P - Health and Social Services		55.3	62.1	12.25
Q - Accommodation, Food and Beverage Services		53.0	61.4	15.68
R - Other Services		96.0	102.1	6.32
TOTAL		826.8	879.9	6.41

Chart 1.
Proportion of Businesses Surviving
from September 1990 to September 1991



Though the net effect of business formation and dissolution may be small over the period of a year, the change

in the composition of the business population can be considerable. The extent of this business population turnover is reflected in Chart 1. which



shows the proportion of September 1991 statistical establishments which were active in September 1990. This proportion of businesses surviving is measured by the establishments continuing over the 1990 - 1991 period taken as a percentage of the September 1991 business population.

As might be expected, the Government Service Industries represent the most stable industry Division with 98.5 % of its establishments surviving the entire year. At the other extreme, both Logging and Forestry as well as Accommodation, Food and Beverage Service Industries have annual survival rates of less than 70%. All other Industry Divisions exhibited proportions within 5.3% of the all-industry survival average of 77.6%.

A review of the survival rate percentages indicates a much higher turnover in the business population than might be assumed when viewing the net change between annual counts. In the next issue of the BRD Newsletter we expect to present information concerning survival rates for selected industries at a greater level of detail and over an extended time period.

Canadian Business Patterns Diskette Product

Would it be useful to have business count data at your fingertips? A diskette product providing counts of businesses by industry and employment size is now being made available by the Business Register Division. The Canadian Business Patterns (CBP) diskette contains both data and PC-based, retrieval software. The user-friendly software supports the creation and manipulation of tables containing counts of business establishments

classified by industry activity and employment size.

- * Tables at the 1, 2 and 4 digit SIC levels;
- * Up-to-date counts of establishments on a provincial and national basis;
- * Step by step user documentation and background methodology;
- * Graphic capabilities;
- * Varied data manipulation and worksheet features;
- * Compatibility with many commercial software packages.

The following three graphic presentations illustrate the three levels of SIC data found on the CBP diskette product (Dec. 1990).

- **Industry Division** (Chart 2) compares the provincial distribution of establishments in the Retail Trade Industry with the distribution of the Canadian population. Although the percentages vary slightly for Quebec and Ontario, the retail

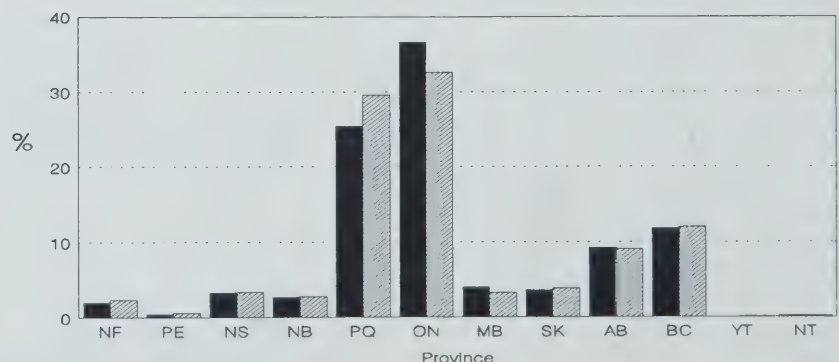
establishments and population proportions for the remaining provinces are almost identical.

- **Major Group** (Chart 3) indicates the provincial distribution of establishments in the Mining Industry. The graphic illustrates the large concentration of Mining establishments in British Columbia.
- **Industry Class** (Chart 4) categorizes the number of General Hospitals in Canada by employment size range. The data are presented at the lowest level of industrial agglomeration, the 4 digit level. The table indicates that General Hospital establishments are concentrated in the 200 to 499 employment size range.

The CBP Diskette is produced on a semi-annual basis, being made available approximately one month after the reference period. Issues back to June 1990 are currently available. The diskette product has been priced as follows:

- One semi-annual release - \$500.

Chart 2.
Provincial Distribution
Retail Trade vs. Canadian Population



Percentage of:
■ Population ▨ Retail Estab.

Population percentages based on Jan.'91 estimates - STC Pub 91-002, Quarterly Demographic Statistics

Chart 3.
Mining

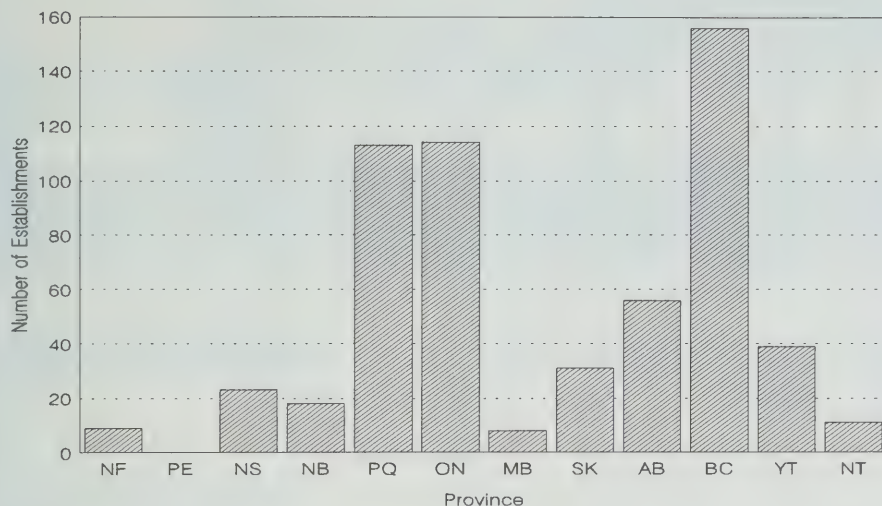
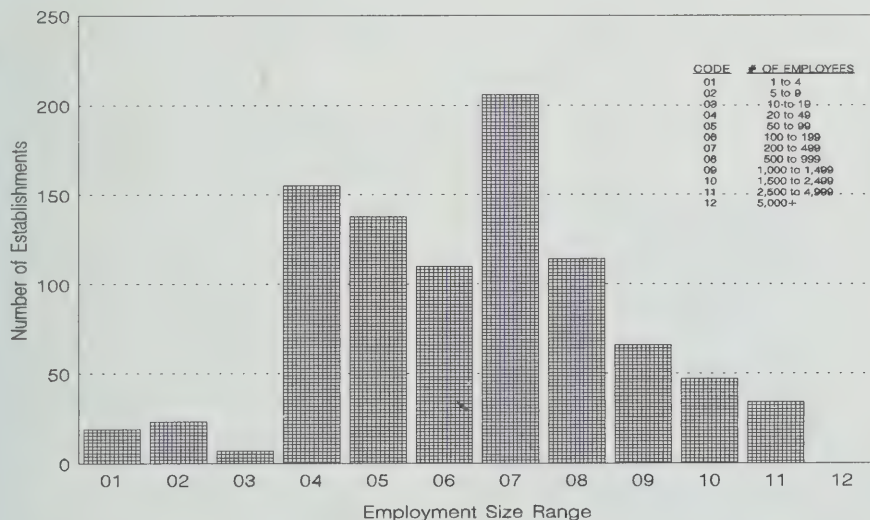


Chart 4.
General Hospitals



- Two semi-annual releases in a calendar year - \$800.00

In addition to the above the BRD would be pleased to undertake requests for special tabulations of business count data. Establishment count data can be tabulated for virtually any geographic area within Canada at greater levels of detail than are available on the CBP diskette product.

For more information on the CBP diskette product or requests for special tabulations, contact:

Kitty Stevens, Product Analysis and Dissemination Section,
Business Register Division
TEL: (613)951-9021
FAX: (613)951-0104).

INTERESTING BUSINESS REGISTER FACTS



Did you know that:

- * 59 % of Canadian businesses are located within the 25 Census Metropolitan Areas
- * 72% of Canadian Businesses are in the Services producing industries
- * Over 2 million records are maintained on the BR database, and these record reflect the population of business establishments over the period of 1989 and 1991
- * In excess of 3 million updates annually, or over 200,000 each month, are applied to the BR database to ensure the most current information



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BRD Newsletter

Business Register Division

Volume 3. No. 1

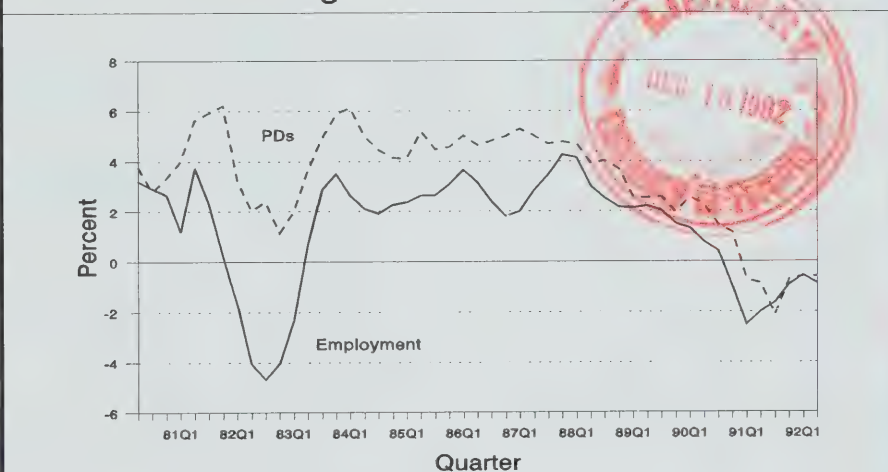
November 1992

Payroll Deduction Accounts Track Employment

Every employer in Canada is required to remit payroll deductions to Revenue Canada - Taxation (RCT) for income tax, the Canada/Quebec Pension Plan, and Unemployment Insurance premiums for each employee. Administrative data from these Payroll Deduction (PD) accounts can provide us with information concerning trends in employment and other economic activities of businesses making remittances. The following analysis examines the variability of active PD remitters over time in the context of employment trends during the two most recent recessionary periods. This continues the theme of an earlier BRD newsletter which discussed the birth of new PD accounts.

The economically relevant events affecting the PD account population are the creation of new accounts associated with increases in employment, and the elimination of accounts associated with declines in business employment. Chart 1

Chart 1
Employment and Remitting PDs
Change from a Year Earlier



shows the year-over-year change in the number of remitting PD accounts, and in the number employed (obtained from the Labour Force Survey, seasonally adjusted data). This chart shows a close correspondence in the pattern of changes for the count of remitting PDs and changes in employment. This correspondence demonstrates that the PD population contains observable economic information, and in particular, that growth in PD remitters can be associated with growth in employment.

PD population growth has lagged employment growth by one to two quarters throughout the last twelve years. During the third quarter of 1981, employment growth began to

fall from a peak of +3.7%. This quarter saw the beginning of the 1981/82 recession. Growth in the PD population began to fall, from a peak of +6.2%, during the first quarter of 1982. During the recovery from the recession, employment growth reached a peak of +3.5% in the fourth quarter of 1983. The PD population reached a peak growth rate of 6.1% during the following quarter.

Employment growth bottomed out at -4.7%, during the third quarter of 1982. The following quarter saw the end of the 1981/82 recession. Growth in the PD population continued to fall until the end of 1982 when it reached a level of +1.1%. Growth in the PD population and in employment



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had a relatively flat trend over the next several years. During the first half of 1988, both series began a downward trend in growth which continued through the start of the most recent recession, in the second quarter of 1990. Employment growth reached a low of -2.5% in the first quarter of 1991. The decline in PD population growth stopped at -2.2% in the third quarter. Thereafter, both series have made an uncertain recovery. During the first two quarters of 1992, year-to-year growth in the PD population has remained virtually unchanged at -0.7%. In the second quarter, employment growth also stopped increasing and actually fell slightly to -0.9%.

Over time, changes in the remitting population have become more closely related to changes in the number employed. Throughout the period from 1980 to the present, each 1% growth in employment has been associated with a 0.5 % growth in the number of remitting PD accounts during the same quarter. During the last five years, however, each 1% growth in employment has also been associated with a 0.7% growth in the number of remitting PD accounts two quarters later. This change in the relationship has caused the two series to converge in recent years. This helps to explain why when employment growth became negative during the 1981/82 recession there was still positive growth in the number of remitting PDs, but during the current recession, PD remitter growth has followed employment growth into negative values.

Chart 2 compares the behaviour of the PD remitter population during the last two recessions. Following the analytical method used in the 1990/91 OECD Economic Survey of Canada,

Chart 2
Recessions Compared: Remitting PDs
Change from a Year Earlier

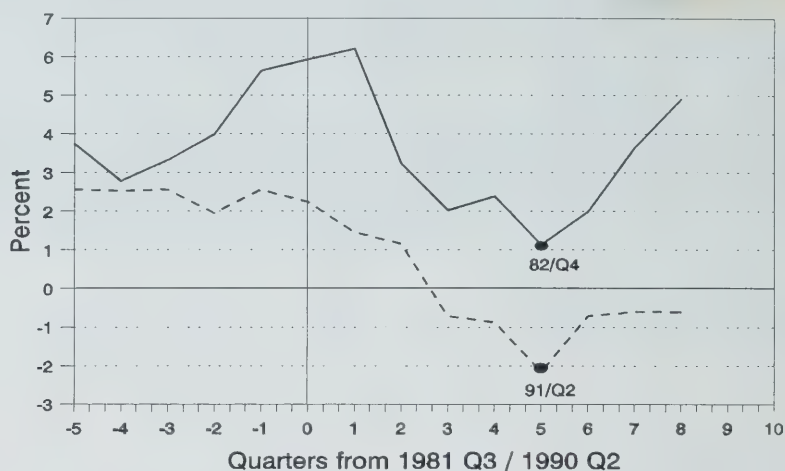
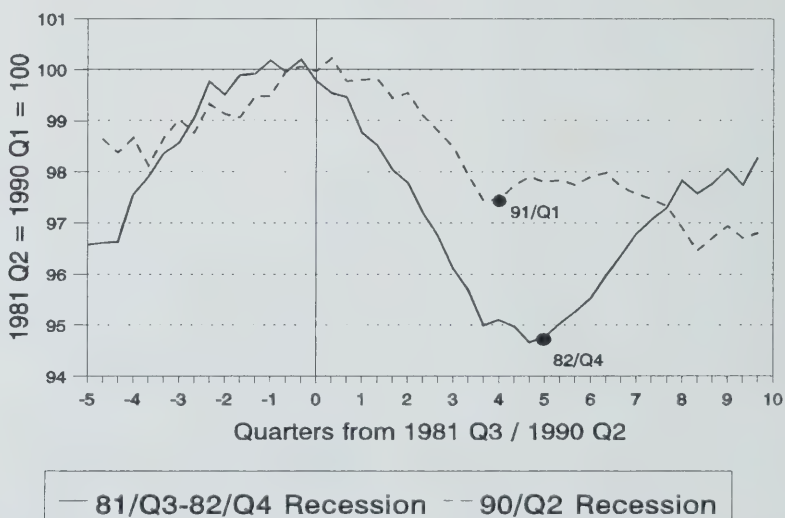


Chart 3
Recessions Compared: Employment



the series for the two recessions are superimposed. Zero on the horizontal axis marks the starting point of the recessions with the preceding five quarters to the left and the following quarters to the right. The start of each recession is followed by a distinct decline in the growth of active PD accounts, with the decline most evident in the 1981/82 recession. At the end of the 1981/82 recession, the growth rate reached the bottom of its trough and thereafter, increased dramatically. This has not happened during the current recession. While the

decline seems to have reached the bottom of its trough by the end of the second quarter of 1991, the increase stalled a quarter later and has remained flat ever since.

Chart 3 compares employment movements during the last two recessions. As in chart 2, the two periods are superimposed (1). Compared to the 1981 recession, employment in the present recession did not have as severe an initial decline. However, employment has gradually declined after

1. In order to compare changes in the employment level employment has been adjusted so that it averages 100 during the quarter before the start of each recession.

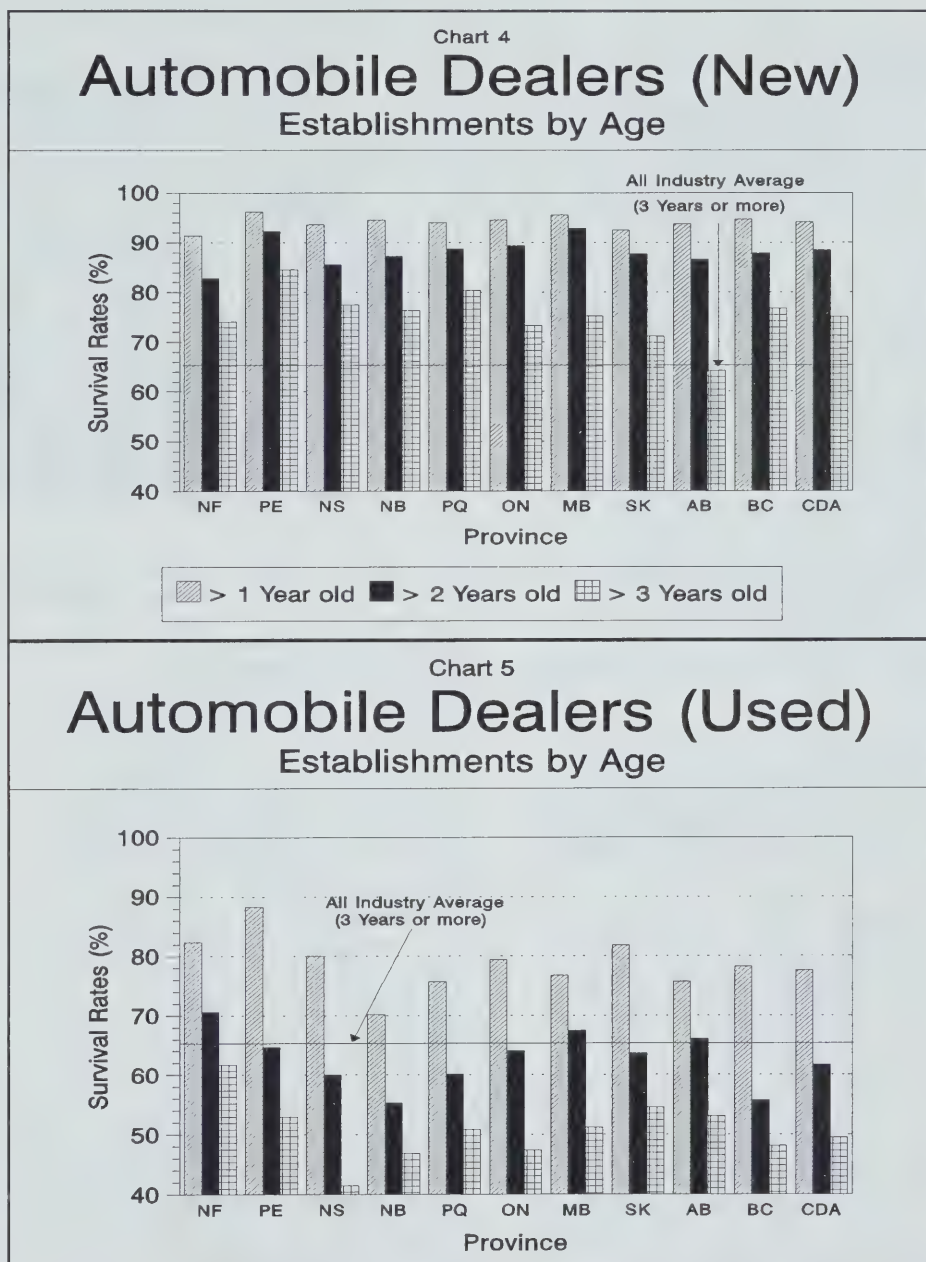
reaching an early 'floor' by the end of the first quarter of 1991.

A comparison of charts 2 and 3 shows that the PD remitter series contains turning points and movements within the business cycle that are similar to those observed in employment levels. During the 1981/82 recession, a distinct trough was observed in both the employment and the remitter series. In the current recession, both series were characterized by shallower declines.

It should be noted that the count of the PD remitters only reflects changes resulting from the initiation or cessation of remittance activity. This data cannot track the expansion or contraction of employment by the population of continuing PD remitters. However, we expect these changes in employment to be reflected in the level of remittance monies paid by continuing PD accounts. Work has begun on a data series based on the employer remittances to RCT. It is hoped that these data will be useful as a supplementary indicator of both employment and industry activity trends.

SURVIVAL RATES - For Selected Industries

As promised in the last newsletter, the establishment survival rates for selected industries are illustrated in Charts 4 through 6. Recall that the proportion of businesses surviving is derived by identifying the establishments continuing over a time period taken as a percentage of the total establishments active at the end of the time period. The survival rates presented in the graphics range from establishments continuing for at least one year to those in operation for three years or



more with each being calculated against the total active establishments as recorded at the outset of 1992.

Analysts often refer to the tendency of consumers to delay or curtail the purchase of large ticket items such as cars and houses during a period of economic uncertainty. If the slumping demand continues over an extended time period it is also expected to produce a reduction in the number of businesses selling or producing these items. With this in mind and, given that these data extend over the current

recessionary period, the following analysis examines the survival rates found in the automotive sales and housing industries.

Within the Retail Trade industry the continuance of establishments involved in the sale of new automobiles for greater than three years appears relatively strong (75.1%) in comparison to the all industry rate of 65.5%.

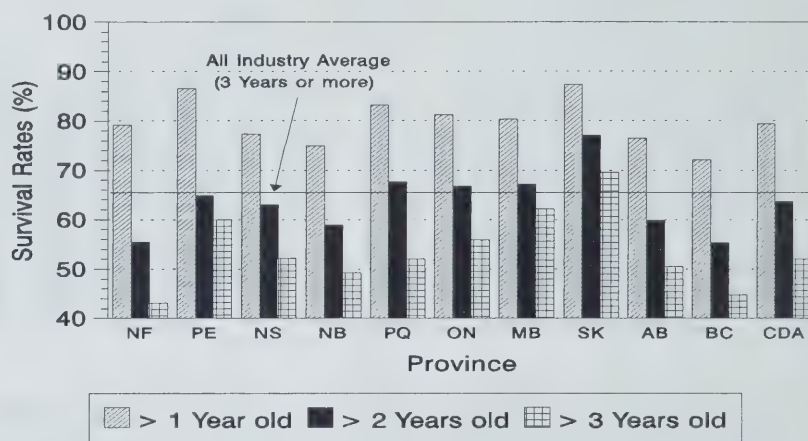
The relative stability of this industry is mirrored across all regions of Canada except Alberta which at 64.2% is

marginally below the all industry average. The rate for businesses continuing for more than three years for the remaining provinces ranges from 71.2% in Saskatchewan to a high of 84.6% in Prince Edward Island (see Chart 4). Taking Alberta as an example, at the outset of 1992 there were 405 active establishments attributed to SIC 6311 - Automobile Dealers (New) and of these, 260 began operations on or before December 31, 1989, and are greater than 3 years old. The rate for businesses at least 1 year old ranges from 91.4% in Newfoundland to a high of 96.2% in Prince Edward Island. This would appear to indicate a low rate of new business entries into an industry which has experienced a relatively low turnover of establishments over the recent recessionary period.

As might be expected, the segment of the retail industry involved in the sale of used automobiles experiences a much greater degree of volatility than new car dealers. The rate for continuing used car establishments is generally between 10 and 25% lower across all regions of Canada than those found in the dealerships selling new automobiles. Furthermore, when compared to the all industries average, greater than 3 years rate (65.5%), the percentage of continuing firms (49.5%) is considerably lower (see chart 5).

Essentially, there are only minimal differences in survival rates between the provinces with the exception of Newfoundland where the greater than 3 year rate is 61.8% and Nova Scotia where it is 41.4%. Most other provinces hover around 50%.

Chart 6
Single Family Housing
Establishments by Age



The continuance rate of establishments greater than 3 years old in the Construction Industry - Single Family Housing (see chart 6) stands at 52.1%, substantially lower than the all industries rate (65.5%). This relatively low rate of establishment continuance is also reflected in the regional survival rates where only Saskatchewan at 69.5% is above the all industry average. While analysts clearly feel that the current recession has contributed to a depressed demand for housing, it should be noted that this particular industry is typically made up of small contractors (over 75% have less than 5 employees) and they tend to close and re-start almost on a seasonal basis. This is supported by the fact 20.6% of the establishments have been in operation for less than a year.

The data presented indicates that the establishment population of new car dealerships is relatively stable and remains so over recent years. Possibly this is due to the support system extended by the car manufacturers and the larger size of these establishments. Both the used car and single housing construction industries exhibit

low establishment continuance rates, likely due to the adverse impact of the current recession but also because of the smaller size of these kinds of establishments and ease with which the businesses can be closed and re-started.

To more fully address the question of the impact of the recession on the survival rates of these industry establishments, data from periods of strong economic growth should also be employed in a comparative analysis. Information can be compiled from historical versions of the Business Register Master Files if there is an interest in extending the analysis for these or other industries. Overall, these examples serve to illustrate the range of information available from the Business Register on rates of establishment continuance and their utility in examining the structural evolution of an industry.

GETTING TO KNOW THE BUSINESS REGISTER

This fall, Business Register Division of Statistics Canada has begun to offer an in-house course providing an overview of the operation and structure of Business Register.

Purpose:

To provide a basic understanding of the Business Register (BR).

Benefits to the Participants:

Upon completion, the participants will be familiar with the structures, the processes and the data elements of the BR, as well as the uses of the BR for data analysis.

Target Population:

Professional and intermediate levels as well as support staff who want a general knowledge of the Business Register.

Course Outline:

- * Structures of the BR
- * Update sources for the BR
- * Major processes of the BR
- * Quality assurance of the BR
- * Data elements of the BR
- * Analytical functions of the BR

Course Duration: 1/2 day

Course Application:

A standard course application form is completed and forwarded to Central Training in the same manner as all other STC in-house courses. For additional information contact Annette Hechme
Tel: (613)951-0116
Fax: (613)951-0104.

BUSINESS REGISTER

DATA RELEASES

- Just a reminder to the Statistics Canada users that the 1990 Tax Estimates data for the Small Business segment of the Register has been available since June.
- Each quarter, Business Register Division produces a selected extract of the Register intended to service both internal and external information requests. The General Purpose File (GPF) or 'flat' file extract of the Register for the end of September 1992 is now available to Statistics Canada users.
- The June 1992 Canadian Business Patterns Diskette product is scheduled for release in November 1992.
- The results of the June 1992 Business Register Quality survey will be presented in a special issue of the BRD Newsletter scheduled for dissemination at the end of November.
- For further information concerning BRD information products, contact: Kitty Stevens, Product Analysis and Dissemination Section, Tel: (613)951-9021 Fax: (613)951-0104



BRD Newsletter

Business Register Division

Special Issue

B.R. QUALITY REPORT

June 1992



RELEASED:
NOVEMBER 1992



Statistics
Canada

Statistique
Canada

Canada

This report and other Business Register data are available from the Product Analysis and Dissemination Section of the Business Register Division. La version française de ce document sera disponible dans les prochaines semaines.

Inquiries about this report and the statistical methodology for the survey should be directed to:

Claude Mainville
Methods and Quality Assurance Section
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Ottawa, Ontario
K1A 0T6

(613) 951-5868

Copies of this document are available by request to:

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The next issues of this report:

Reference Month

Release Month

November 1992

March 1993

STATISTICS CANADA
BUSINESS REGISTER DIVISION

DATA QUALITY REPORT
For the Non-Integrated Portion
of the
Business Register

Reference Month: June 1992

Released Month: November 1992

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INTRODUCTION

The Business Register Division maintains a population register of Canadian businesses which includes information on their size, structure and type of business conducted. This register serves as the central frame from which Business, Trade and Employment programs of Statistics Canada conduct census and sample surveys. As the frame is a crucial component of the survey process, the purpose of this report is to provide insight into the quality of the information in the register.

The register was designed in accordance with business survey requirements and a fixed set of resources. For larger businesses, representing 80% of the economic activity, it was determined that very detailed information concerning the structure of the businesses was required. This was to ensure adequate survey frame coverage. For smaller businesses, representing the vast majority of the population but only 20% of the economic activity, considerably less detailed information was acceptable. This approach optimized the resource usage while having a marginal impact on survey frame coverage.

As a result of the design strategy, the frame is structured into three components. The first is the Integrated Portion (IP), representing some 119,000 establishments of large businesses in Canada. This portion of the frame contains details of the business operating units and the types of economic activities being conducted. The IP portion with its more complex business structure, is subject to continuous review as a result of ongoing survey processes. In addition, the largest 300 enterprises in Canada will be intensively reviewed over the course of the Large Enterprises Statistics Project. The second component is the Non-Integrated Portion (NIP), representing some 780,000 establishments of smaller businesses for which only basic information such as major type of business activity conducted and its geographical location is maintained. The third component is the unclassified portion, representing 17,000 potential establishments which are not yet in scope for business surveys. These are derived from administrative data sources and are awaiting classification.

The IP portion of the Register is subject to intensive maintenance activities as a result of survey feedback processes and the on-going business profiling activities. As a by-product of these activities, a range of quality measurements are available for the IP component of the Register. Accordingly, the aim of this study was to develop similar quality measurement information for the much larger NIP component of the Register. Quality measurements for the NIP should prove particularly useful to survey programs drawing samples from this segment of the business universe because it enables them to better evaluate potential error in their estimates.

Finally, this report presents the results of the June 1992 Quality Assurance survey of small (NIP) businesses. This sample survey was designed to measure the quality of key frame data. It is intended to provide data which can be used by users of the frame to understand its limitations and possibly for the refinement of survey estimates. In this report, the data quality results obtained by the June 1992 survey will be analyzed to identify any situations where measures might be taken in order to improve the quality of the frame data on the Register. Results of this survey will also be compared to findings from the September 1991 survey to assess the stability of the frame data quality.

HIGHLIGHTS

One of the most notable results of the June 1992 quality study was its estimate of the proportion of inactive businesses to be found on the small business or Non-Integrated Portion of the Register. At the All Industry or Canada level, it was estimated that 684,614 or 88.76% of the frame records reflected in the NIP were active. This is 3.09% higher than the number reported in the September 1991 NIP QA report. Statistical analysis has shown that the difference is significant enough to indicate that the result cannot be dismissed as being due to sampling error alone and therefore indicates an improvement.

For the NIP business population, the primary signal that a business has become inactive is the remittance patterns associated with the Payroll Deduction accounts. After 12 consecutive months of non-remittances, the Register processes are designed to assign an inactive status to the frame record. The 12 month criteria is applied so that seasonal business operations remain in-scope for the survey programs. However, the lengthy delay in assigning an inactive status dictates that, especially during recessionary periods, there could be a fairly significant number of these records within the NIP frame.

ALL INDUSTRY DIVISIONS

As of June 1992 there were 771,316 businesses listed in the Non-Integrated Portion of the frame.

- Of these, 684,614 (88.76%) were estimated to have been active. The proportion of businesses with an active status was at its lowest level for **Business Services** (77.49%) and ranged to a high of 97.01% for **Real Estate Operators and Insurance Agents**.
 - Of the active establishments, 88.37% were correctly classified to the level of industrial detail required by the economic survey programs.
 - The quality of the industrial classification for active establishments varied from a low of 75.81% in **Wholesale Trade** to a high of 96.35% in **Health and Social Services**.

- 98.7% of the active establishments had been assigned the correct Census Metropolitan Area/Census Agglomeration code.
- Survey estimates showed that less than 0.4% of the active establishments in the Non-Integrated portion were estimated to be duplicates of businesses listed in the Integrated Portion (or larger business segment) of the Business Register.
- These results are relatively consistent with the findings of the September 1991 survey. The proportion of businesses on the register that were active was 3.09% higher in the recent study. On the other hand, the rate of correct industry coding was down by 2.96% at the industry class level. Variation of quality of this order does not seem unreasonable given the size of the business register and the complexity of the processes that affect it.

MANUFACTURING INDUSTRY

There were 43,383 establishments listed in the non-integrated portion of the frame that were coded as Manufacturing Industries.

- 38,082 establishments (87.78%) were active.
 - Of these, 80.79% had the correct SIC code.
 - 98.5% had the correct Census Metropolitan Area / Census Agglomeration code.
 - Results of this study were consistent with the September 1991 findings. None of the changes were large enough to preclude their being explained by the sampling error associated with the two studies.

WHOLESALE TRADE INDUSTRY

There were 42,514 wholesalers listed on the non-integrated portion of the frame.

- 38,781 establishments (91.22%) were active.
 - Of these, 75.81% had the correct SIC code.
 - 98.71% were classified to the correct Census Metropolitan Area / Census Agglomeration.

RETAIL TRADE INDUSTRY

There were 126,412 retailers listed in the non-integrated portion of the frame - a drop of 6330 since the September 1991 study.

- 108,846 establishments (86.10%) were estimated to be active.
 - Of these, 86.01% had the correct SIC code.
 - 99.46% were classified to the correct Census Metropolitan Area / Census Agglomeration. This is an improvement over the estimate of 96.44% observed in September 1991.

ACCOMMODATION, FOOD AND BEVERAGE INDUSTRY

There were 57,439 establishments listed in the non-integrated portion of the frame for the Accommodation, Food and Beverage Industry.

- 44,889 establishments (78.15%) were active.
 - Of these, 84.85% had the correct SIC code.
 - 99.11% were classified to the correct Census Metropolitan Area / Census Agglomeration.

NOTES TO THE USERS

Upcoming Changes to the Report

In the current report, the statistics are based on counts of units referring to both coverage and content. During fiscal year 1992-93, the methodology for producing estimates based on the Gross Business Income and the Number of Employees will be developed. These new statistics will allow the users to get an idea of the relative importance of the frame errors and their impact on the economic sub-annual survey estimates. Development of this methodology is progressing and should be available for the next release of this report in March 1993.

Upcoming Data Quality Improvements

The major source for the Number of Employees data of the Business Register NIP units is the Revenue Canada Taxation PD20 form. The second source is interviews conducted in the Regional Offices for the BR Division. The shortcoming of both of the above sources is that they represent only one point in time and, therefore, the data for the Number of Employees can soon become dated. To improve the situation, a model to estimate the Number of Employees based on the monthly remittances has been developed and is expected to be implemented in 1992-93. With the model in place, the quality of the Number of Employees data will be improved.

A study is underway by BRD QA staff to identify the causes of errors in SIC codes. Then, actions to reduce the error rates for the SIC will be determined.

Provincial Tables

Although the BRD Quality Survey was designed to produce quality estimates on an industry basis, the data have been re-weighted in order to produce estimates by province. These tables are available on request. The current sample design could not adequately support the production estimates for all provinces. In the next survey cycle, the sample will be allocated so that this requirement can be met.

OVERALL FRAME QUALITY

This indicator is an addition to this report. It is designed to measure the quality of the records rather than each content element. It is based on the premise that a record is correct if the **Postal Code** and **Standard Industrial Classification** permit the collection of pertinent survey data.

SUMMARY TABLES

All Industry Divisions

Population Size: 771,316		Sample Size: 5,901		Number of respondents in the sample: 5,330		
QUALITY OF COVERAGE		Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage
Active		684,614	88.76	86.52	91.00	0.01
Active & not Duplicates		681,775	88.39	86.04	90.74	0.01
Missing due to Unclassified Units		3,935	0.51	0.50	0.52	<0.01
Adjusted Population		685,710	88.90	86.55	91.25	0.01
QUALITY OF CONTENT		Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage
<i>Standard Industrial Classification:</i>						
Major Group		625,391	91.35	89.72	92.98	0.01
Industry Group *		610,611	89.19	87.41	90.98	0.01
Industry Class *		605,023	88.37	86.49	90.26	0.01
<i>Standard Geographical Classification:</i>						
Province		683,425	99.83	99.70	99.96	<0.01
Census Metropolitan Area/Census Agglomeration		675,722	98.70	98.27	99.13	<0.01
<i>Administrative Information:</i>						
Legal Name		572,911	83.68	81.20	86.17	0.02
Operating Name		552,763	80.74	78.30	83.18	0.02
Physical Location Postal Code		603,463	88.15	85.22	91.08	0.02
OVERALL FRAME QUALITY		628,904	91.86	90.25	93.48	0.01

* Definitions of the categories can be found in the *Concepts* Section.

Agriculture and Related Services

Population Size: 55,435		Sample Size: 612		Number of respondents in the sample: 594		
QUALITY OF COVERAGE		Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage
Active		51,599	93.08	91.05	95.11	0.01
Active & not Duplicates		51,599	93.08	91.05	95.11	0.01
Active & not Duplicates & Classified in right Division		47,579	85.83	83.05	88.61	0.02
Missing due to Unclassified Units		112	0.20	0.19	0.22	0.04
Missing due to Units Classified in wrong Division		600	1.08	0.29	1.87	0.37
Adjusted Population		48,291	87.11	84.22	90.00	0.02
QUALITY OF CONTENT		Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage
<i>Standard Industrial Classification:</i>						
Major Group		46,738	90.58	88.16	93.00	0.01
Industry Group *		46,738	90.58	88.16	93.00	0.01
Industry Class *		46,738	90.58	88.16	93.00	0.01
<i>Standard Geographical Classification:</i>						
Province		51,505	99.82	99.46	100.00	<0.01
Census Metropolitan Area/Census Agglomeration		50,384	97.65	96.39	98.90	0.01
<i>Administrative Information:</i>						
Legal Name		44,961	87.14	84.37	89.90	0.02
Operating Name		41,689	80.79	77.54	84.04	0.02
Physical Location Postal Code		47,112	91.30	88.97	93.64	0.01
OVERALL FRAME QUALITY		46,457	90.03	87.55	92.51	0.01

* The Standard Industrial Classification was only validated to the major group.

Fishing and Trapping

Population Size: 6,031		Sample Size: 100		Number of respondents in the sample: 100		
QUALITY OF COVERAGE		Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage
Active		5,490	91.03	85.47	96.59	0.03
Active & not Duplicates		5,490	91.03	85.47	96.59	0.03
Active & not Duplicates & Classified in right Division		5,008	83.04	75.76	90.32	0.04
Missing due to Unclassified Units		9	0.15	0.07	0.23	0.27
Missing due to Units Classified in wrong Division		111	1.84	0.00	4.92	0.85
Adjusted Population		5,128	85.03	77.12	92.93	0.05
QUALITY OF CONTENT		Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage
<i>Standard Industrial Classification:</i>						
Major Group		5,008	91.22	85.45	96.99	0.03
Industry Group *		5,008	91.22	85.45	96.99	0.03
Industry Class *		5,008	91.22	84.45	96.99	0.03
<i>Standard Geographical Classification:</i>						
Province		5,429	98.89	96.76	100.00	0.01
Census Metropolitan Area/Census Agglomeration		5,369	97.80	94.80	100.00	0.02
<i>Administrative Information:</i>						
Legal Name		5,249	95.61	91.43	99.79	0.02
Operating Name		4,948	90.13	84.05	96.21	0.03
Physical Location Postal Code		4,888	89.03	82.67	95.40	0.04
OVERALL FRAME QUALITY		4,888	89.03	82.67	95.40	0.04

* The Standard Industrial Classification was only validated to the major group.

Logging and Forestry

Population Size: 6,900		Sample Size: 166		Number of respondents in the sample: 154		
QUALITY OF COVERAGE		Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage
Active		6,313	91.49	82.25	100.00	0.05
Active & not Duplicates		6,313	91.49	82.25	100.00	0.05
Active & not Duplicates & Classified in right Division		6,106	88.49	79.08	97.90	0.05
Missing due to Unclassified Units		19	0.28	0.22	0.33	0.10
Missing due to Units Classified in wrong Division		1,491	21.61	0.00	43.47	0.52
Adjusted Population		7,616	110.38	86.57	134.19	0.11
QUALITY OF CONTENT		Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage
<i>Standard Industrial Classification:</i>						
Major Group		6,070	96.15	93.91	98.39	0.01
Industry Group		6,070	96.15	93.91	98.39	0.01
Industry Class *		6,070	96.15	93.91	98.39	0.01
<i>Standard Geographical Classification:</i>						
Province		6,313	100.00	100.00	100.00	0.00
Census Metropolitan Area/Census Agglomeration		6,295	99.71	99.17	100.00	<0.01
<i>Administrative Information:</i>						
Legal Name		5,496	87.06	74.50	99.61	0.07
Operating Name		5,341	84.60	72.12	97.09	0.08
Physical Location Postal Code		6,209	98.35	96.55	100.00	0.01
OVERALL FRAME QUALITY		6,088	96.44	94.25	98.62	0.01

* The Standard Industrial Classification was validated to the industry group.

Mining, Quarries and Oil Wells

Population Size: 4,193		Sample Size: 121		Number of respondents in the sample: 112		
QUALITY OF COVERAGE		Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage
Active		3,923	93.56	83.74	100.00	0.05
Active & not Duplicates		3,898	92.96	83.10	100.00	0.05
Active & not Duplicates & Classified in right Division		3,607	86.02	75.72	96.33	0.06
Missing due to Unclassified Units		19	0.45	0.41	0.50	0.05
Missing due to Units Classified in wrong Division		604	14.40	0.00	34.72	0.72
Adjusted Population		4,230	100.88	78.10	123.66	0.12
QUALITY OF CONTENT		Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage
<i>Standard Industrial Classification:</i>						
Major Group		3,182	81.11	66.28	95.94	0.09
Industry Group		3,158	80.50	65.64	95.36	0.09
Industry Class *		3,158	80.50	65.64	95.36	0.09
<i>Standard Geographical Classification:</i>						
Province		3,843	97.96	94.00	100.00	0.02
Census Metropolitan Area/Census Agglomeration		3,575	91.13	86.83	95.43	0.02
<i>Administrative Information:</i>						
Legal Name		3,729	95.05	91.85	98.26	0.02
Operating Name		3,656	93.19	89.52	96.87	0.02
Physical Location Postal Code		2,921	74.46	59.79	89.13	0.10
OVERALL FRAME QUALITY		3,309	84.35	78.77	89.93	0.03

* The Standard Industrial Classification was validated to the industry group.

Manufacturing						
Population Size: 43,383		Sample Size: 566		Number of respondents in the sample: 490		
QUALITY OF COVERAGE		Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage
Active		38,082	87.78	79.84	95.72	0.05
Active & not Duplicates		38,082	87.78	79.84	95.72	0.05
Active & not Duplicates & Classified in right Division		34,325	79.12	70.69	87.55	0.05
Missing due to Unclassified Units		266	0.61	0.58	0.64	0.03
Missing due to Units Classified in wrong Division		3,294	7.59	5.16	10.03	0.16
Adjusted Population		37,885	87.33	78.56	96.10	0.05
QUALITY OF CONTENT		Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage
<i>Standard Industrial Classification:</i>						
Major Group		32,320	84.87	79.58	90.16	0.03
Industry Group		30,765	80.79	75.31	86.26	0.03
Industry Class *		30,765	80.79	75.31	86.26	0.03
<i>Standard Geographical Classification:</i>						
Province		37,986	99.75	99.26	100.00	<0.01
Census Metropolitan Area/Census Agglomeration		37,510	98.50	97.31	99.68	0.01
<i>Administrative Information:</i>						
Legal Name		34,528	90.67	87.94	93.39	0.02
Operating Name		33,079	86.86	83.71	90.02	0.02
Physical Location Postal Code		33,786	88.72	85.61	91.83	0.02
OVERALL FRAME QUALITY		33,848	88.88	83.83	93.93	0.03

* The Standard Industrial Classification was validated to the industry group.

Construction

Population Size: 98,907		Sample Size: 538		Number of respondents in the sample: 464		
QUALITY OF COVERAGE		Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage
Active		90,910	91.91	85.64	98.19	0.03
Active & not Duplicates		90,910	91.91	85.64	98.19	0.03
Active & not Duplicates & Classified in right Division		88,272	89.25	82.82	95.67	0.04
Missing due to Unclassified Units		457	0.46	0.45	0.48	0.02
Missing due to Units Classified in wrong Division		4,857	4.91	2.54	7.28	0.25
Adjusted Population		93,586	94.62	87.77	101.47	0.04
QUALITY OF CONTENT		Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage
<i>Standard Industrial Classification:</i>						
Major Group		87,117	95.83	93.94	97.72	0.01
Industry Group		83,040	91.34	85.90	96.79	0.03
Industry Class *		83,040	91.34	85.90	96.79	0.03
<i>Standard Geographical Classification:</i>						
Province		90,910	100.00	100.00	100.00	0.00
Census Metropolitan Area/Census Agglomeration		89,833	98.82	97.30	100.00	0.01
<i>Administrative Information:</i>						
Legal Name		74,446	81.89	75.67	88.11	0.04
Operating Name		73,270	80.60	74.31	86.88	0.04
Physical Location Postal Code		82,227	90.45	85.91	94.99	0.03
OVERALL FRAME QUALITY		87,195	95.91	93.73	98.10	0.01

* The Standard Industrial Classification was validated to the industry group.

Transportation and Storage

Population Size: 29,860		Sample Size: 233		Number of respondents in the sample: 214		
QUALITY OF COVERAGE		Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage
Active		26,322	88.15	81.14	95.16	0.04
Active & not Duplicates		26,322	88.15	81.14	95.16	0.04
Active & not Duplicates & Classified in right Division		23,342	78.17	67.92	88.42	0.07
Missing due to Unclassified Units		162	0.54	0.51	0.58	0.03
Missing due to Units Classified in wrong Division		2,246	7.52	2.17	12.87	0.36
Adjusted Population		25,750	86.24	74.67	97.80	0.07
QUALITY OF CONTENT		Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage
<i>Standard Industrial Classification:</i>						
Major Group		23,342	88.68	79.73	97.62	0.05
Industry Group		22,951	87.19	78.15	96.23	0.05
Industry Class *		22,951	87.19	78.15	96.23	0.05
<i>Standard Geographical Classification:</i>						
Province		26,322	100.00	100.00	100.00	0.00
Census Metropolitan Area/Census Agglomeration		25,499	96.87	92.11	100.00	0.03
<i>Administrative Information:</i>						
Legal Name		23,201	88.14	81.01	95.27	0.04
Operating Name		23,206	88.16	82.35	93.97	0.03
Physical Location Postal Code		23,246	88.31	81.10	95.53	0.04
OVERALL FRAME QUALITY		22,519	85.55	75.76	95.34	0.06

* The Standard Industrial Classification was validated to the industry group.

Communication and Other Utilities

Population Size: 4,113		Sample Size: 123		Number of respondents in the sample: 115		
QUALITY OF COVERAGE		Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage
Active		3,787	92.07	70.88	100.00	0.12
Active & not Duplicates		3,761	91.44	70.22	100.00	0.12
Active & not Duplicates & Classified in right Division		3,417	83.08	61.57	100.00	0.13
Missing due to Unclassified Units		27	0.66	0.60	0.71	0.04
Missing due to Units Classified in wrong Division		192	4.67	0.00	11.09	0.70
Adjusted Population		3,636	88.40	65.95	110.85	0.13
QUALITY OF CONTENT		Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage
<i>Standard Industrial Classification:</i>						
Major Group		3,443	90.92	86.47	95.37	0.02
Industry Group		3,443	90.92	86.47	95.37	0.02
Industry Class *		3,443	90.92	86.47	95.37	0.02
<i>Standard Geographical Classification:</i>						
Province		3,787	100.00	100.00	100.00	0.00
Census Metropolitan Area/Census Agglomeration		3,640	96.12	94.16	98.08	0.01
<i>Administrative Information:</i>						
Legal Name		3,512	92.74	88.71	96.77	0.02
Operating Name		3,255	85.95	80.73	91.17	0.03
Physical Location Postal Code		3,549	93.72	89.90	97.53	0.02
OVERALL FRAME QUALITY		3,322	87.72	83.11	92.33	0.03

* The Standard Industrial Classification was validated to the industry group.

Wholesale Trade						
Population Size: 42,514	Sample Size: 374		Number of respondents in the sample: 340			
QUALITY OF COVERAGE	Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage	
Active	38,781	91.22	85.45	96.99	0.03	
Active & not Duplicates	38,781	91.22	85.45	96.99	0.03	
Active & not Duplicates & Classified in right Division	31,692	74.54	67.00	82.09	0.05	
Missing due to Unclassified Units	321	0.76	0.73	0.78	0.02	
Missing due to Units Classified in wrong Division	3,821	8.99	5.20	12.77	0.21	
Adjusted Population	35,834	84.29	75.85	92.73	0.05	
QUALITY OF CONTENT	Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage	
<i>Standard Industrial Classification:</i>						
Major Group	30,281	78.08	69.10	87.06	0.06	
Industry Group	29,398	75.81	66.64	84.97	0.06	
Industry Class *(501)	29,398	75.81	66.64	84.97	0.06	
<i>Standard Geographical Classification:</i>						
Province	38,781	100.00	100.00	100.00	0.00	
Census Metropolitan Area/Census Agglomeration	38,279	98.71	97.56	99.85	0.01	
<i>Administrative Information:</i>						
Legal Name	34,303	88.45	79.88	97.03	0.05	
Operating Name	33,948	87.54	79.94	95.13	0.04	
Physical Location Postal Code	35,015	90.29	86.07	94.51	0.02	
OVERALL FRAME QUALITY	31,377	80.91	72.01	89.81	0.06	

* The Standard Industrial Classification was validated to the industry group except for group "501" which was done to the class level.

Retail Trade

Population Size: 126,412		Sample Size: 716		Number of respondents in the sample: 645		
QUALITY OF COVERAGE		Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage
Active		108,846	86.10	81.09	91.12	0.03
Active & not Duplicates		108,751	86.03	81.01	91.05	0.03
Active & not Duplicates & Classified in right Division		97,576	77.19	72.06	82.31	0.03
Missing due to Unclassified Units		627	0.50	0.48	0.51	0.01
Missing due to Units Classified in wrong Division		4,961	3.92	1.73	6.12	0.29
Adjusted Population		103,164	81.61	76.03	87.18	0.03
QUALITY OF CONTENT		Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage
<i>Standard Industrial Classification:</i>						
Major Group		94,609	86.92	78.64	95.20	0.05
Industry Group		93,617	86.01	77.71	94.30	0.05
Industry Class * (601)		93,617	86.01	77.71	94.30	0.05
<i>Standard Geographical Classification:</i>						
Province		108,552	99.73	99.43	100.00	<0.01
Census Metropolitan Area/Census Agglomeration		108,260	99.46	99.04	99.88	<0.01
<i>Administrative Information:</i>						
Legal Name		79,476	73.02	62.52	83.52	0.07
Operating Name		71,888	66.05	55.94	76.15	0.08
Physical Location Postal Code		98,536	90.53	81.87	99.18	0.05
OVERALL FRAME QUALITY		97,181	89.28	81.17	97.40	0.05

* The Standard Industrial Classification was validated to the industry group except for group "601" which was done to the class level.

Finance and Insurance						
Population Size: 22,159	Sample Size: 154		Number of respondents in the sample: 142			
QUALITY OF COVERAGE	Category	Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage
Active		20,613	93.02	53.02	100.00	0.22
Active & not Duplicates		20,613	93.02	53.02	100.00	0.22
Active & not Duplicates & Classified in right Division		19,260	86.92	46.74	100.00	0.24
Missing due to Unclassified Units		157	0.71	0.66	0.75	0.03
Missing due to Units Classified in wrong Division		3,228	14.57	5.42	23.71	0.32
Adjusted Population		22,645	102.19	60.99	143.39	0.21
QUALITY OF CONTENT	Category	Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage
<i>Standard Industrial Classification:</i>						
Major Group		19,188	93.09	88.86	97.31	0.02
Industry Group		18,971	92.03	87.70	96.37	0.02
Industry Class *		18,971	92.03	87.70	96.37	0.02
<i>Standard Geographical Classification:</i>						
Province		20,245	98.21	94.72	100.00	0.02
Census Metropolitan Area/Census Agglomeration		19,607	95.12	89.01	100.00	0.03
<i>Administrative Information:</i>						
Legal Name		19,059	92.46	87.11	97.81	0.03
Operating Name		19,743	95.78	93.58	97.98	0.01
Physical Location Postal Code		16,412	79.62	51.25	100.00	0.18
OVERALL FRAME QUALITY		18,326	88.91	82.21	95.60	0.04

* The Standard Industrial Classification was validated to the industry group only.

Real Estate Operators and Insurance Agents

Population Size: 32,642		Sample Size: 171		Number of respondents in the sample: 138		
QUALITY OF COVERAGE		Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage
Active		31,665	97.01	94.05	99.96	0.02
Active & not Duplicates		28,985	88.80	71.81	100.00	0.10
Active & not Duplicates & Classified in right Division		27,816	85.22	67.43	100.00	0.11
Missing due to Unclassified Units		186	0.57	0.54	0.60	0.03
Missing due to Units Classified in wrong Division		2,181	6.68	2.35	11.01	0.33
Adjusted Population		30,183	92.47	74.16	110.78	0.10
QUALITY OF CONTENT		Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage
<i>Standard Industrial Classification:</i>						
Major Group		29,643	93.61	86.65	100.00	0.04
Industry Group		29,540	93.29	86.31	100.00	0.04
Industry Class *		29,540	93.29	86.31	100.00	0.04
<i>Standard Geographical Classification:</i>						
Province		31,613	99.84	99.52	100.00	<0.01
Census Metropolitan Area/Census Agglomeration		31,613	99.84	99.52	100.00	<0.01
<i>Administrative Information:</i>						
Legal Name		30,380	95.94	90.48	100.00	0.03
Operating Name		29,864	94.31	88.79	99.84	0.03
Physical Location Postal Code		30,570	96.54	94.30	98.78	0.01
OVERALL FRAME QUALITY		30,392	95.98	90.52	100.00	0.03

* The Standard Industrial Classification was validated to the industry group only.

Business Services						
Population Size: 75,364	Sample Size: 412		Number of respondents in the sample: 354			
QUALITY OF COVERAGE	Category	Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage
Active		58,403	77.49	66.53	88.46	0.07
Active & not Duplicates		58,403	77.49	66.53	88.46	0.07
Active & not Duplicates & Classified in right Division		55,214	73.26	62.25	84.28	0.08
Missing due to Unclassified Units		481	0.64	0.62	0.66	0.02
Missing due to Units Classified in wrong Division		7,038	9.34	4.20	14.47	0.28
Adjusted Population		62,733	83.24	71.09	95.39	0.07
QUALITY OF CONTENT	Category	Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage
<i>Standard Industrial Classification:</i>						
Major Group		55,214	94.54	91.20	97.88	0.02
Industry Group		52,283	89.52	85.71	93.34	0.02
Industry Class *		52,283	89.52	85.71	93.34	0.02
<i>Standard Geographical Classification:</i>						
Province		58,403	100.00	100.00	100.00	0.00
Census Metropolitan Area/Census Agglomeration		57,665	98.74	96.60	100.00	0.01
<i>Administrative Information:</i>						
Legal Name		50,641	86.71	79.84	93.58	0.04
Operating Name		48,835	83.62	72.72	94.52	0.07
Physical Location Postal Code		50,084	85.76	69.85	100.00	0.09
OVERALL FRAME QUALITY		54,573	93.44	89.94	96.94	0.02

* The Standard Industrial Classification was validated to the industry group only.

Government Services *

Population Size: 122		Sample Size: 47		Number of respondents in the sample: 47		
QUALITY OF COVERAGE		Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage
Active		114	93.44	87.80	99.09	0.03
Active & not Duplicates		114	93.44	87.80	99.09	0.03
Active & not Duplicates & Classified in right Division		106	86.89	79.20	94.57	0.05
Missing due to Unclassified Units		1	0.82	0.42	1.22	0.25
Missing due to Units Classified in wrong Division		94	77.05	0.00	226.47	0.99
Adjusted Population		201	164.75	15.14	314.36	0.46
QUALITY OF CONTENT		Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage
<i>Standard Industrial Classification:</i>						
Major Group		106	92.98	86.96	99.00	0.03
Industry Group		106	92.98	86.96	99.00	0.03
Industry Class		106	92.98	86.96	99.00	0.03
<i>Standard Geographical Classification:</i>						
Province		114	100.00	100.00	100.00	0.00
Census Metropolitan Area/Census Agglomeration		114	100.00	100.00	100.00	0.00
<i>Administrative Information:</i>						
Legal Name		106	92.98	86.96	99.00	0.03
Operating Name		96	84.21	75.51	92.91	0.05
Physical Location Postal Code		90	78.95	69.38	88.51	0.06
OVERALL FRAME QUALITY		106	92.98	86.96	99.00	0.03

* The Standard Industrial Classification was only validated for the major group "84 - International and Other Extra-Territorial Agencies" .

Educational Services *						
Population Size: 5,616	Sample Size: 120			Number of respondents in the sample: 110		
QUALITY OF COVERAGE	Category	Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage
	Active	5,042	89.78	84.03	95.53	0.03
	Active & not Duplicates	5,042	89.78	84.03	95.53	0.03
	Active & not Duplicates & Classified in right Division	4,782	85.15	78.50	91.80	0.04
	Missing due to Unclassified Units	25	0.45	0.41	0.49	0.05
	Missing due to Units Classified in wrong Division	756	13.46	4.22	22.70	0.35
	Adjusted Population	5,563	99.06	87.67	110.45	0.06
QUALITY OF CONTENT	Category	Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage
<i>Standard Industrial Classification:</i>						
	Major Group	4,782	94.84	90.69	99.00	0.02
	Industry Group	4,630	91.83	86.62	97.03	0.03
	Industry Class	4,630	91.83	86.62	97.03	0.03
<i>Standard Geographical Classification:</i>						
	Province	5,042	100.00	100.00	100.00	0.00
	Census Metropolitan Area/Census Agglomeration	4,941	98.00	95.27	100.00	0.01
<i>Administrative Information:</i>						
	Legal Name	4,588	91.00	85.48	96.51	0.03
	Operating Name	4,039	80.11	72.52	87.70	0.05
	Physical Location Postal Code	4,335	85.98	79.36	92.60	0.04
OVERALL FRAME QUALITY		4,681	92.84	87.95	97.73	0.03

* The Standard Industrial Classification was only validated at the industry group. The population excludes all elementary, secondary, post-secondary, university and any other educational institutions operated by the governments.

Health and Social Services *

Population Size: 62,323		Sample Size: 263		Number of respondents in the sample: 230		
QUALITY OF COVERAGE		Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage
Active		60,083	96.41	91.81	100.00	0.02
Active & not Duplicates		60,073	96.39	91.79	100.00	0.02
Active & not Duplicates & Classified in right Division		59,502	95.47	90.83	100.00	0.02
Missing due to Unclassified Units		275	0.44	0.42	0.46	0.02
Missing due to Units Classified in wrong Division		1,990	3.19	0.79	5.60	0.38
Adjusted Population		61,767	99.11	93.88	104.34	0.03
QUALITY OF CONTENT		Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage
<i>Standard Industrial Classification:</i>						
Major Group		59,512	99.05	98.31	99.79	0.00
Industry Group		57,889	96.35	93.71	98.99	0.01
Industry Class		57,889	96.35	93.71	98.99	0.01
<i>Standard Geographical Classification:</i>						
Province		60,083	100.00	100.00	100.00	0.00
Census Metropolitan Area/Census Agglomeration		59,880	99.66	99.23	100.00	<0.01
<i>Administrative Information:</i>						
Legal Name		53,702	89.38	81.16	97.60	0.05
Operating Name		50,618	84.25	80.12	88.37	0.02
Physical Location Postal Code		49,187	81.87	63.62	100.00	0.11
OVERALL FRAME QUALITY		59,310	98.71	97.87	99.56	0.00

* The Standard Industrial Classification was validated to the industry group only. The population excludes all public hospitals and any other institutions that are part of the I.P.

Accommodation, Food and Beverage Services

Population Size: 57,439		Sample Size: 286		Number of respondents in the sample: 245		
QUALITY OF COVERAGE		Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage
Active		44,889	78.15	68.41	87.89	0.06
Active & not Duplicates		44,889	78.15	68.41	87.89	0.06
Active & not Duplicates & Classified in right Division		43,871	76.38	66.51	86.25	0.07
Missing due to Unclassified Units		383	0.67	0.64	0.69	0.02
Missing due to Units Classified in wrong Division		8,098	14.10	13.14	15.05	0.03
Adjusted Population		52,352	91.14	81.23	101.05	0.06
QUALITY OF CONTENT		Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage
<i>Standard Industrial Classification:</i>						
Major Group		43,774	97.52	95.35	99.68	0.01
Industry Group		43,677	97.30	95.10	99.50	0.01
Industry Class * (921)		38,089	84.85	75.49	94.21	0.06
<i>Standard Geographical Classification:</i>						
Province		44,864	99.94	99.84	100.00	<0.01
Census Metropolitan Area/Census Agglomeration		44,488	99.11	97.83	100.00	0.01
<i>Administrative Information:</i>						
Legal Name		34,498	76.85	62.98	90.73	0.09
Operating Name		31,686	70.59	57.00	84.18	0.10
Physical Location Postal Code		38,254	85.22	75.38	95.06	0.06
OVERALL FRAME QUALITY		43,567	97.05	94.61	99.50	0.01

* The Standard Industrial Classification was validated to the industry group except for group "921" which was done to the class level.

Other Services

Population Size: 97,903		Sample Size: 899		Number of respondents in the sample: 836		
QUALITY OF COVERAGE		Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage
Category						
Active		89,753	91.68	88.83	94.52	0.02
Active & not Duplicates		89,748	91.67	88.82	94.52	0.02
Active & not Duplicates & Classified in right Division		82,653	84.42	81.05	87.80	0.02
Missing due to Unclassified Units		409	0.42	0.40	0.43	0.02
Missing due to Units Classified in wrong Division		1,994	2.04	1.20	2.88	0.21
Adjusted Population		85,056	86.88	83.40	90.36	0.02
QUALITY OF CONTENT		Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage
Category						
<i>Standard Industrial Classification:</i>						
Major Group		81,063	90.32	87.68	92.95	0.01
Industry Group		79,327	88.38	86.08	90.68	0.01
Industry Class *		79,327	88.38	86.08	90.68	0.01
<i>Standard Geographical Classification:</i>						
Province		89,630	99.86	99.60	100.00	<0.01
Census Metropolitan Area/Census Agglomeration		88,769	98.90	98.23	99.58	<0.01
<i>Administrative Information:</i>						
Legal Name		71,037	79.15	73.53	84.76	0.04
Operating Name		73,602	82.01	76.72	87.29	0.03
Physical Location Postal Code		77,044	85.84	80.26	91.42	0.03
OVERALL FRAME QUALITY		81,767	91.10	88.50	93.70	0.01

* The Standard Industrial Classification was validated to the industry group only.

COMPARISONS OF SEPTEMBER 1991 AND JUNE 1992 NIP QA DATA

Now that estimates for two separate points in time are available, the estimates can be compared to determine if there has been any changes, irrespective of whether these changes lead to an improvement of quality or otherwise.

Due to sampling error, the estimates may not be equal even if there is no change in quality. The sample chosen at each point in time is one of many possible samples that could have been selected using the same sample size and the same sample design. If the true value is the same at both points in time, the differences in the estimates calculated from each sample would only exceed a certain limit approximately 5% of the time -- (this limit is approximately twice the standard error of the estimated difference in the true value at the two points in time). On this basis, if the difference between the two estimates actually obtained is greater than this limit we can say that this difference is statistically significant (i.e., unlikely due solely to sampling error).

Population:

The NIP population decreased by 9,233 establishments (-1.18%) since the September 1991, NIP QA report.

	<u>Number of Establishments</u>	<u>Change</u>
<i>Net gains were noticed in :</i>		
Agricultural and Related Services	2,191	+4.12%
Finance and Insurance	1,748	+8.56%
Business Services	749	+1.00%
<i>Net losses were noticed in :</i>		
Retail Trade	6,330	-4.77%
Construction	4,453	-4.31%
Wholesale Trade	1,726	-3.90%
Manufacturing	1,575	-3.50%
Transportation and Storage	507	-1.67%
Logging and Forestry	310	-4.30%

Activity:

Establishments were found to be inactive at a rate of 11.24% at the all-industry level for June 1992. This rate is 3.09% less than the result of the September 1991 QA survey.

Based on tests of statistical significance, increases in the proportion of active units were observed for :

Agriculture and Related Services	6.17%
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Real Estate Operator and Insurance Agent	11.81%
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Adjusted Population

These numbers are estimates of the perfect universe. Inactive units, duplicates and units classified to the wrong industrial divisions are omitted from the counts while unclassified units and units that should have been coded to this industrial classification were added.

Even though there were no significant changes over all industries, the following industries were determined to have statistically significant changes from September 1991 to June 1992 :

Logging and Forestry	+41.78%
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Accommodation, Food & Beverage Services	+17.11%
---	---------

Agricultural and Related Services	+6.49%
-----------------------------------	--------

Standard Industrial Classification:

The quality of the Standard Industrial Classification (SIC) decreased by 2.58% and 2.96% at the industry group and industry class levels, respectively. At the major group level, an improvement was noted in **Logging and Forestry** (+19.2%) while the quality of SICs for the **Other Services** decreased by (- 4.6%).

Standard Geographical Classification:

The quality of the Census Metropolitan Area coding improved by 1.4% to 98.7%. The **Retail Trade, Agriculture and Related Services** and **Other Services** industries improved by 3.0%, 6.3% and 2.2% respectively. The quality of coding for **Finance and Insurance** industries decreased by 4.9% which was not significant.

Legal name:

The reliability of legal name decreased by 4.7% over all industries since the September 1991 report. Statistically significant changes were noted in **Construction** industries (-10.4%) and **Transportation and Storage** (- 8.6%).

1. CONCEPTS

1.1 Business Register

The **Business Register (BR)** is a list frame for both annual and sub-annual business surveys at Statistics Canada. The main data sources are two administrative files from Revenue Canada - Taxation (RC-T): the **Tax returns** of corporations and individuals, and the **Payroll Deduction (PD)** Accounts. All employers in Canada must have a PD Account in order to remit monies for Pension Plans, Unemployment Insurance, and Personal Income Tax. In the following paragraphs, the BR concepts are presented from the point of view of its use by sub-annual economic surveys.

Only some of the units on the BR are accessible to economic surveys. The accessible units have complete Standard Industrial Classification (SIC) and Standard Geographical Classification (SGC) codes, and are in-scope for economic surveys. These accessible units can be divided into two sets of businesses. First the complex or large businesses, with a revenue above specific thresholds defined by industry division and province, are called the **Integrated Portion (IP)** units. They are labelled as IP units because their structure is recorded with a linked set of legal, operating and administrative records. The second set of accessible units (with a revenue below the thresholds) includes the small businesses which are referred to as the **Non-Integrated Portion (NIP)** units. For these NIP units, the BR makes use of only the PD Account data as a source. The accessible units are available to economic surveys via the **Statistical List**, which contains the data necessary for sub-annual survey sampling, frame delineation and construction.

The inaccessible BR units, called ZIP, are either out-of-scope (OOS) units, called **ZIP-OOS**, or in-scope but not completely classified (called **ZIP-Unclassified**). The latter are units for which complete Standard Industrial Classification (SIC) or Standard Geographical Classification (SGC) codes are not known.

The ZIP-OOS units are: PD Accounts without remittances in the last thirteen months, household accounts, foreign accounts, accounts owned by businesses which have ceased their economic activities, government special work program accounts, pension plan accounts, or accounts used to solve a succession ("estate of").

The statistics included in this report provide an evaluation of the quality of the Non-Integrated Portion of the Business Register as provided by the Statistical List and the NIP PD Account list.

1.2 Industrial Classification

The industrial classification used in this report is based on the 1980 version of the Standard Industrial Classification (SIC). A description of the various industries and groups of industries is contained in the "Standard Industrial Classification Manual", Catalogue 12-501. The SIC uses 4 digits to code business activities. Four digits identify an Industry Class, the first three digits define Industry Groups, and the first two digits designate a Major Group. The Major Groups are combined to form eighteen Industry Divisions, as listed below :

- A. Agriculture and Related Services
- B. Fishing and Trapping
- C. Logging and Forestry
- D. Mining, Quarries and Oil Wells
- E. Manufacturing
- F. Construction
- G. Transportation and Storage
- H. Communication and Other Utilities
- I. Wholesale Trade
- J. Retail Trade
- K. Finance and Insurance
- L. Real Estate Operators and Insurance Agents
- M. Business Services
- N. Government Services
- O. Educational Services
- P. Health and Social Services
- Q. Accommodation, Food, and Beverage Services
- R. Other Services

There are some industries which are out-of-scope for this report either because they are not currently part of any statistical program or because they are covered in the IP only. These exclusions are:

1. Private Households (Industry Class 9741), and
2. Federal, Provincial, and Local Government Services (Major Groups 81, 82 and 83, respectively)

1.3 Frame Quality

This report provides statistics for two major categories of quality : **coverage** and **content**.

1.3.1 Quality of Coverage

This section covers the quality associated with the assignment of a unit to a survey population. The categories for which estimates are reported in this document are defined below.

1. Active

This category includes NIP units confirmed as carrying on business activity.

2. Active and not duplicate

This category includes active NIP units not duplicated or already represented as an IP unit.

3. Active and not duplicate and classified in the right industry division

This category includes active and not duplicate units in NIP which are correctly classified to the proper industry division.

4. Missing due to Unclassified Units

A ZIP-unclassified unit is missing in the NIP because of the processing time lag associated with classifying PD Accounts.

5. Missing due to Industry Misclassification

A NIP unit is missing from one Industry Division because it's SIC was wrongly coded to another Industry Division.

6. Adjusted Population

This number represents a corrected number of NIP records that would exist if there were no coverage errors and thus these would meet the selection criteria for survey samples. It is the union of categories 3., 4. and 5. defined immediately above.

1.3.2 Quality of Content

This section covers the quality associated with one or more data elements of a NIP unit. The different categories used in this report are defined below.

1.3.2.1 Categories for Statistical List data items:

STANDARD INDUSTRIAL CLASSIFICATION

The STANDARD INDUSTRIAL CLASSIFICATIONS quality results were measured at the levels established acceptable to survey criteria. However, the summary tables may be a combination of 2, 3 and 4 digit industrial classification under the heading of a major industrial group.

1. Major Group

This category includes the units which have the correct value in the first two digits of their 1980 SIC code.

2. Industry Group

This category includes the units which have the correct value in the first, second and third digit of their 1980 SIC code.

3. Industry Class

This category includes the units which have the correct value in all four digits of their 1980 SIC code.

STANDARD GEOGRAPHICAL CLASSIFICATION

4. Province Code

This category includes the units which have been assigned to the correct province using the province code portion of their SGC. The SGC is obtained by applying the postal code to SGC concordance table to the unit's postal code.

5. Census Metropolitan Area / Census Agglomeration

This category includes the units which have been assigned to the correct Census Metropolitan Area and Census Agglomeration.

1.3.2.2 Categories for PD Account list data items:

ADMINISTRATIVE INFORMATION

6. Legal Name

This category includes the units which have the correct legal name.

7. Operating Name

This category includes the units which have the correct operating name.

8. Location postal code

This category includes the units which have the correct postal code for the location of their economic activity.

OVERALL FRAME QUALITY

This indicator is an addition to this report. It is designed to measure the quality of the records rather than each content element. It is based on the premise that a record is correct if the **Postal Code** and **Standard Industrial Classification** permit the collection of pertinent survey data.

2. DATA RELIABILITY

2.1 Sampling Errors

A measure of the sampling error in this report is the **95% confidence interval** for the percentage. That interval is calculated using the estimate of percentage itself and the square root of its estimated variance. According to the theory that is the basis for its construction, it has a 95% chance of containing the true value. The greater the estimated sampling error, the wider the interval.

The second measure used in this report is the **coefficient of variation**. This is the ratio of the square root of the estimated variance of an estimate over the estimate itself. The more sampling errors there are, the larger the coefficient of variation.

The 95% confidence interval and coefficient of variation appear in all tables of content and coverage errors.

2.2 Non Sampling Errors

2.2.1 Definition

Non-sampling errors are due to other reasons than sampling. Some of the non-sampling errors that happen at certain stages of the survey process that led to producing this report are as follows.

a) **Sampling frame**

A small percentage of the NIP units are not eligible for contact. Since pro-rating is used to provide estimates for these units, an attempt is made to reduce the non-coverage error introduced in the statistics. The remaining errors are due to any shortcomings of the pro-rating.

b) Data collection

At the data collection stage there are many possible errors: the interviewer may misread questions, misunderstand the answer, or miscode the SIC. The respondent may misunderstand the question, or answer the question incorrectly. Interviewers may be unable to contact a business (complete non-response), or some information may be difficult to obtain (partial non-response) i.e. PD account numbers. This may cause the estimate of duplication to be understated.

c) Data capture and Head Office processing

Keying errors may occur in the capture of a response and during the manual updating of the CFDB. For the latter stage, SIC coding errors may also occur.

2.2.2 Measures

Non-response and undercoverage may result in a bias in the results if the non-respondents are not similar to the respondents. Measures of complete non-response and non-coverage rates are given in Tables A, B, and C of this document. The three non-response categories and the non-coverage category used in the tables are defined below.

2.2.2.1 Non Contact

A unit is a non-contact if the business respondent could not be contacted during the data collection time period.

2.2.2.2 Refusal

A unit is a refusal if the contacted business respondent refused to give answers.

2.2.2.3 Unprocessed

A unit is unprocessed if the business respondent was contacted and gave answers to questions, but the results of the contact had not been processed and therefore not used at the time of estimation.

2.2.2.4 Undercoverage

Undercoverage is a count of units that were not eligible to be contacted.

Table A presents the sample counts of non-response for the NIP. For each count, the percentage of the units is given. Note that the total NIP sample size was 4153.

TABLE A: NON-RESPONSE AND NON COVERAGE COUNTS FOR THE NIP SAMPLE

Type of Non-Response	Total Count	Percent of Total
Non-Contacts	544	9.22
Refusals	26	0.44
Unprocessed	1	0.02
Total Non-response	571	9.68

Table B presents non-response counts and percentages for the ZIP units.

TABLE B: NON-RESPONSE COUNTS FOR THE ZIP

	Pop'n Size	# of No Res	% of No Res
ZIP TOTAL	11,871	1,597	13.45

Table C contains the weighted non-response estimated percentage for the NIP population. The total estimated percentage presented in the table can be interpreted as an upper bound for the possible bias in the estimates of this report. Obviously, 0% is the lower bound.

Note that the undercoverage number should not be subject to estimation error, as they are the sum of the strata sizes where no sample was drawn.

Each estimate is presented as a percentage of the entire NIP population, along with the 95% confidence interval for the estimate, and its coefficient of variation.

**TABLE C: WEIGHTED NON-RESPONSE AND UNDERCOVERAGE
PERCENTAGES FOR THE NIP**

Estimate of Non- Response	Estimated Percent	Lower 95% Confidence Bound	Upper 95% Confidence Bound	Coefficient of Variation
Non Contacts	22.37	21.91	22.83	0.01
Refusals	0.28	0.19	0.37	0.16
Unprocessed	0.00	0.00	0.00	0.00
Non-Response Subtotal	22.65	22.18	23.12	0.01
Undercoverage	4.23	-	-	-
TOTAL	26.88	26.42	27.35	0.01

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BRD Newsletter

Business Register Division

Volume 4. no1

January 1994

Introducing the Quarterly Business Entry and Exit Survey

- The survey estimate for the 1st quarter of 1993 indicate that the formation of new employer businesses (12,900 entries) across Canada is barely keeping pace with the number of business closures (13,000 exits).
- To place these results in another context, for every 1,000 employer businesses in Canada, 19.8 were new entries in the first quarter of 1993 while 20 were estimated to have exited from the employer population.

When business analysts discuss the composition or evolution of the Canadian business population they often employ data from different sources, each having their own particular orientation to identifying business entities. In an effort to place the results of a recent pilot survey on employer business entries and exits in perspective, the following provides a thumbnail sketch of the major sources of business population data.

TABLE 1 The Canadian Business Population		
SOURCE	VINTAGE	SIZE
LEAP	1991	927,100 enterprises 148,200 newly identified 158,500 no longer identified
BRD Enterprises and Establishments	September 1993	857,200 enterprises 902,400 establishments
CFIB	Fiscal 92/93	135,000 business "births" 135,000 business "deaths"
Corporate (T2) Tax	1992 estimated	620,000 filers
Self Employed (T1) Tax	1992 estimated	440,000 filers
Total Business Tax		1,060,000 T1 and T2 filers
PD Remitters	4th quarter 1993	830,000 PD accounts (seasonally adjusted)
Annual total PD Remitters	1993	914,100 PD accounts

Understanding the business unit definitions and coverage employed by the different sources will serve as a reference point when interpreting the Entry and Exit survey results presented in the final section.

The major sources of business counts

Counts relating to the Canadian business population are available from each of the following sources (Table 1.).

The Longitudinal Employment Analysis Program (LEAP), as maintained by the Business and Labour Market Analysis Group of Statistics Canada, produces a business population time series which includes a count of all employer enterprises by industry, province, employment

size. It provides a count of Newly Identified and No Longer Identified businesses between successive years. This data series is disseminated by the Small Business & Special Surveys Division and becomes available approximately a year and a half after the end of the reference year.

Similar stock counts of employers businesses are available from the Business Register Division (BRD) approximately two months after a given quarter. The major difference between the LEAP and BRD business enterprise counts is that the former provides a total of all business in existence over the course of a year while the BRD produces a snapshot business count for a given quarter. The BRD also



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disseminates counts of business establishments through the BRD's Canadian Business Patterns (CBP) diskette product. As less than 5% of Canadian employer businesses operate multiple establishments, the CBP counts are often used as a proxy for enterprise counts.

In its annual report "Business Growth in Canada", The Canadian Federation of Independent Business (CFIB) provides counts on business "births" and business closures or "deaths". Data are collected through a survey of name registration agencies as well as the bankruptcy data available from the Department of Consumer and Corporate Affairs. Though these flow (birth and death) statistics cover the entire business universe, no estimate of the stock business population is provided. These data are published approximately nine months after the reference year.

The business tax filer data compiled by the BRD also provides an indication of the number of self employed business entities (T1 filers) and incorporated businesses (T2 filers) with more than \$25,000 of gross business income. However, the combination of these two tax file populations tends to overstate the number of businesses. For example, each member of a partnership business files a separate T1 tax return and a business enterprises may also submit T2 returns for several corporate entities within its umbrella of operations. The preliminary

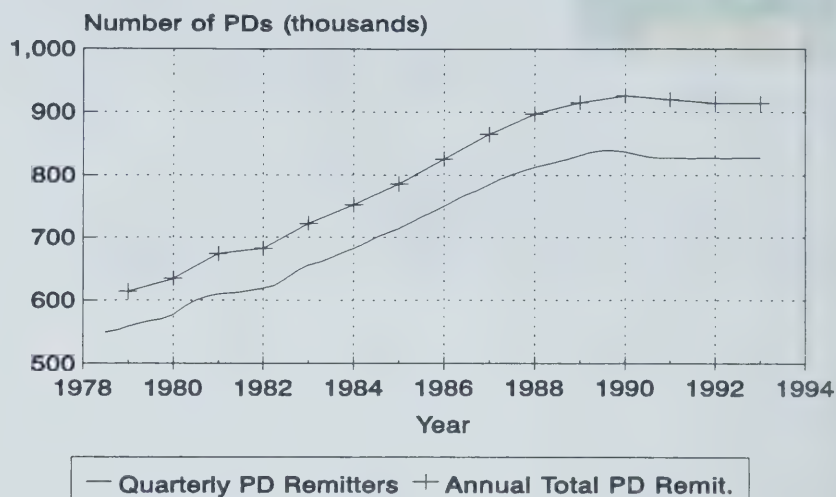
counts are produced some 9 months after the reference period.

The Payroll Deduction (PD) Remitter Series were developed by the BRD as timely indicators of changes in the size of the population of Canadian employer businesses. As some 10 % of employer enterprises maintain multiple PD accounts this is not a business count data series. However, this is an accurate reflection of those PD accounts with remittance activity and therefore, reflects the trend in the number of actively operating employer businesses. Furthermore, these data are available 1 month after the reference period.

Background on the PD remitter series

For eligible employees in each pay period, Canadian employers deduct monies for contributions to UIC, CPP/QPP and Personal Income Tax. In order to credit employer businesses with these source

CHART 1
PD Remitters Series



deductions, employers are assigned PD accounts.

On a quarterly basis the BRD determines how many PD accounts were updated to reflect the processing of these source deductions by Revenue Canada. This quarterly series of PD Remitters is then seasonally adjusted.

The Annual Total PD Remitter series is based on the unadjusted cumulative count of PD remitters for each year.

Both the Quarterly PD Remitter series and the Annual Total PD Remitter series are shown in Chart 1. Tabulations for both series are available for each province or region as determined by the employer address.

The new Business Entry and Exit survey

As we have seen, there are a number of sources which provide data on the size (stock) of the Canadian business population. Only the LEAP

and CFIB sources provide some measure of business formation or dissolution (flow). Both provide only annual data and are available more than a year after the reference period. One need only note the vigorous media reporting of the monthly business bankruptcy data to recognize the demand for timely data concerning changes in the business population. The new Business Entry and Exit survey is intended to provide business analysts with a timely source of information on both the entry of new businesses and the exit of business units from the employer population.

This new quarterly survey is designed to determine the business population flow on both a regional basis and at the industry division level. The results are based on the occurrence of certain basic business events.

Defining business events

Business entry - A newly started business with at least 1 employee; this new business owns no other business.

Business exit - A business which has ceased operations permanently.

Ownership change - may occur when a business changes status from unincorporated to incorporated, the partnership composition of the business changes or with the purchase and continued operation of an existing business by new owners.

Upgraded Employer Status - A business previously operational

but without employees but now has employees for whom PD remittances are required.

Downgraded Employer Status - A business continues to be operational but no longer has employees requiring PD remittances.

PD Accounts as signals of business events

The BRD has the ability to identify all PD account activations and inactivations and therefore can determine a universe of businesses which are potential entries or exits. The difficulty is that the PD account signals may be triggered for several other reasons.

Although a business with employees will have at least one PD account, approximately 10 percent open 2 or more payroll deduction accounts. A business may open additional PD accounts to handle additional hiring, operate separate accounts for salaried vs. hourly workers, or for seasonal vs. full-time. The activation of a PD account does not necessarily indicate the entry of a new business. Conversely, the inactivation of, or the failure to remit to a PD account doesn't always indicate the closure of a business. Both the activation and inactivation of an account may signal a change in ownership. A failure to remit may well be of a temporary nature with the expectation to hire employees with an upturn in business.

The Entry and Exit survey design selects a sample from the activated and inactive PD account universe on the basis of region and industry. A telephone survey is conducted to collect specific information on the previously noted business events.

Pilot survey qualifiers

For the pilot survey the target population of businesses was limited to Small and Medium-sized Enterprises (SME) with the expectation that the bulk of business entries and exits occur for businesses in this group. The SME category of businesses accounts for approximately 90 % of the business enterprises and approximately 40 % of the gross business income. The longer term intention is to develop methodology which will allow the inclusion of large businesses in the survey estimates.

Not all industries were defined as in scope for the Entry and Exit survey. The Agricultural, Fishing and Trapping, Government Services, Education Services and the Health and Social Services industries have been excluded because of the non-typical business activity conducted by these enterprises.

Although the survey sample was designed to produce estimates at the province and industry level supplemented by a small selection of greater SIC detail, the release of data at the increased levels of detail will only occur once successive cycles of data have been compiled. One of the survey

objectives is to create a time series of data on entries and exits in order to discern long term trends. It is therefore imperative to confirm the continuity of the estimates prior their release at increased levels of detail. The expectation is that 4 quarters of survey results will be required prior to releasing results at increased levels of industrial detail.

Incidence of entry/exit for the business population

The incidence indicator is calculated by dividing the estimated number of entries or exits by the stock of businesses at the outset of the quarter reference period. This will assist the analyst comparing the magnitude of entries and exits between quarters, regions and industries. Chart 2 depicts the incidence of business entries and exits per 1000 businesses by region. The relatively high incidence of entries and exits in British Columbia parallels other economic data which has consistently pointed to the relative economic strength of this province as compared to the rest of Canada. Conversely, the relative sluggishness of the Ontario economy is reflected in the fact that it is the only region where the incidence of exits is notably higher than entries.

For all of Canada the survey results indicate 12,900 estimated business entries as opposed to an estimate of 13,000 exits. Chart 3 provides the estimated counts by region.

Chart 4 shows a comparison of entry and exit incidence by Industry. Given the depressed

CHART 2
Incidence of ENTRIES and EXITS
By Region - Q1 1993

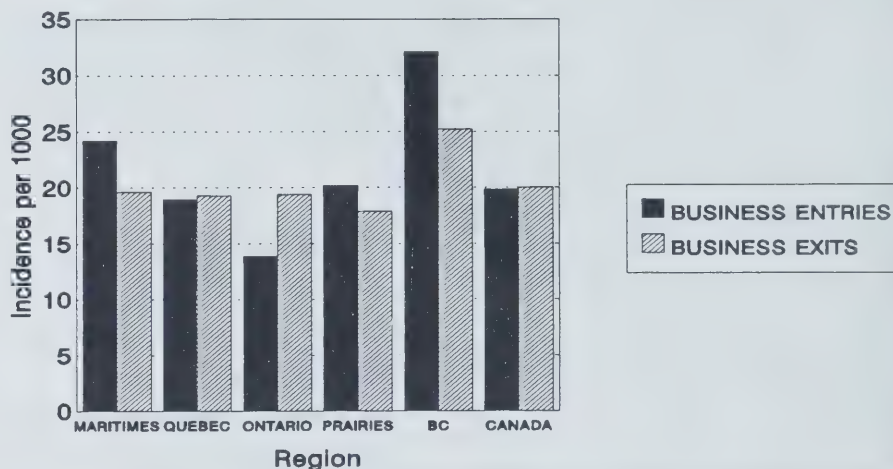


CHART 3
Business ENTRIES and EXITS
By Region - Q1 1993

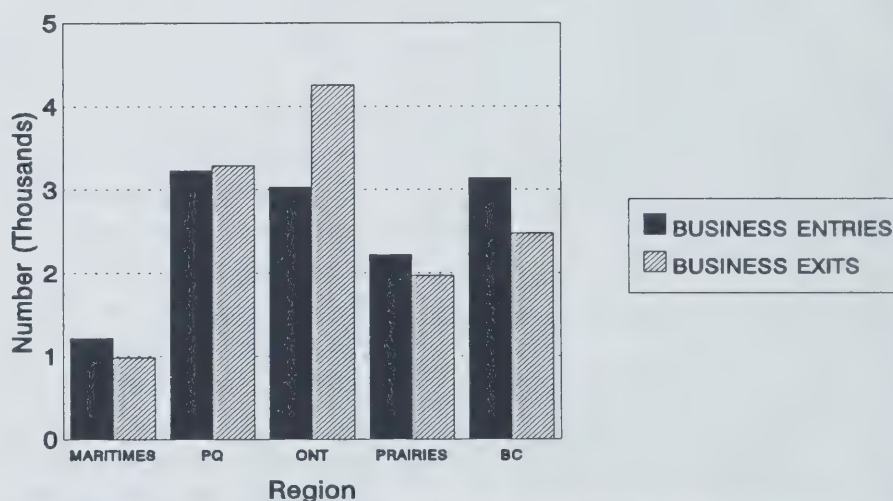
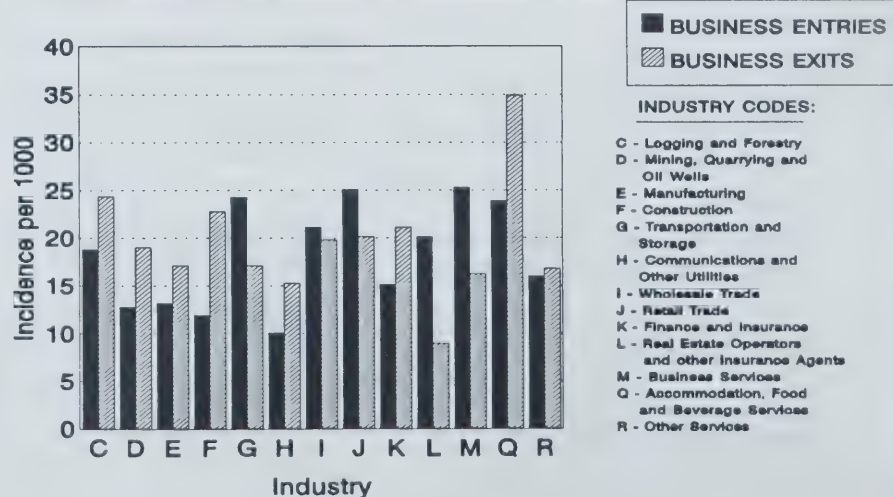


CHART 4
Incidence of ENTRIES and EXITS
By Industry - Q1 1993



state of consumer confidence over the latter stages of 1992, it is not surprising to see the Accommodation, Food and Beverage Service industry with a far greater incidence of business exits. The high incidence of exits in the Construction industry is to be expected given the project orientation of the activity. Many smaller construction firms cease operations at the completion of a given project and re-form as a business employer at the outset of a new project.

Only three industries show a markedly higher incidence of business entries. The Transportation and Storage industry and the Business Services industry both provide support services to other industrial sectors. Interestingly, the Real Estate Operators and Insurance Agents sector indicate a high incidence of new entries during a period when the real estate market was considered quite poor. Possibly the down-sizing of the larger real estate firms resulted in agents forming a considerable number of very small business units.

The distribution of business events

A regional distribution of business entries/exits and the stock population is provided in Chart 5. With the exception of BC and Ontario the share entries and exits for each region is in keeping with their share of the business population. It is also evident that Ontario has a relatively lower share of business entries while BC has a

CHART 5
Business ENTRIES, EXITS and BUSINESS POPULATION - Q1 1993

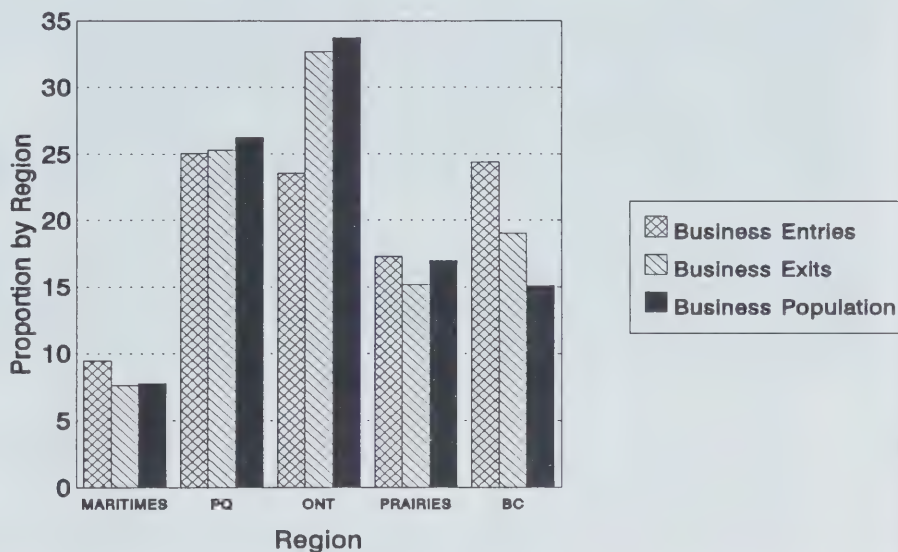


CHART 6
Business ENTRY Event Proportions
By Region - Q1 1993

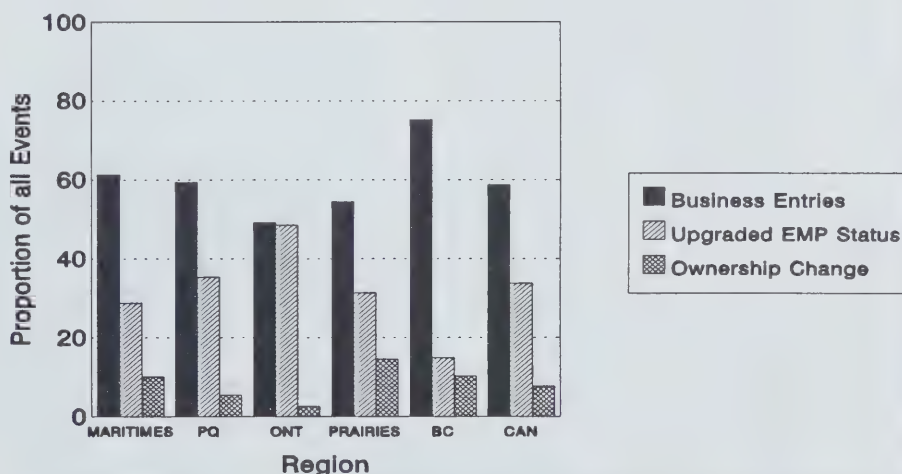
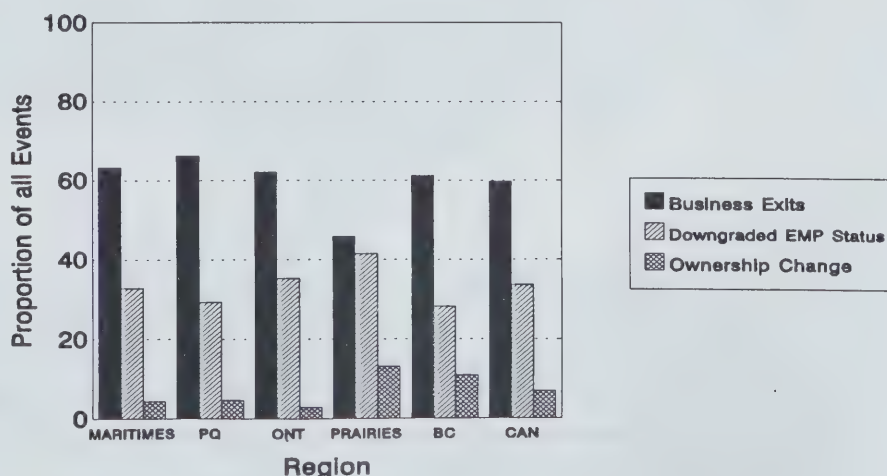


CHART 7
Business EXIT Event Proportions
By Region - Q1 1993



higher proportion of both entries and exits than reflected in their share of the total business population. Closer investigation indicates that the differing industrial structures of the two provinces account for these differences.

As noted earlier, the survey is designed to collect data on employer business entries and exits, whether the PD account activity is a result of an upgrade or downgrade of employer status, or if an ownership change has taken place. Charts 6 and 7 indicate the distribution of these business events within each region. For businesses opening new PD accounts the distribution between the event categories is approximately the same for all regions with the exception of Ontario. In the latter case, the opening of a new PD account is just as likely to represent the resumption of an employee payroll as the creation of a new business. Alternatively, the termination of an account generally means the closure of the business approximately 60 % of the time for all regions except the Prairies. Here businesses are almost as likely to continue the business unit without any employees as opposed to the permanent closure of the business.

Conclusion

The entry and exit estimates derived from this new survey will provide economic analysts with a balanced view of the impact of the business cycle on the formation and dissolution

of business units. This is in contrast to the current situation where business bankruptcies are eagerly reported upon, but little timely information is available on business formation.

The expectation for producing future survey estimates is to catch-up the remaining quarters of 1993 by compressing data collection activities in the first half of 1994. Beginning with the first quarter of 1994, the objective is to release survey estimates 4 months after the reference period. Also with the release of the First Quarter 1994 estimates, a greater level of industry detail is expected to be made available.

In conjunction with the Business Survey Methods, Survey Operations and Systems Development Divisions, the Business Register has endeavoured to develop a survey vehicle with the flexibility to address new and varied requirements for statistical data on business formation and dissolution. For example, if a client requires information for specific 4 digit SIC industry, the sample can be expanded accordingly; or should additional information be needed to address a given industry issue, the data collection process is designed to readily accept new survey questions.

If further information is required concerning the Quarterly Business Entry and Exit survey results or on the supporting methodology, please contact Stewart Taylor at 951-0389.

For additional information concerning the availability of Business Register or business tax file sourced statistical data, please contact any of the following:

- **Louise Bard**
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- **Bill Penner**
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BRD Newsletter

Business Register Division

Special Issue

B.R. QUALITY REPORT

November 1992



RELEASED: JULY 1993



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This report and other Business Register data are available from the Product Analysis and Dissemination Section of the Business Register Division. La version française de ce document sera disponible dans les prochaines semaines.

Inquiries about this report and the statistical methodology for the survey should be directed to:

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STATISTICS CANADA
BUSINESS REGISTER DIVISION

DATA QUALITY REPORT

**For the Non-Integrated Portion
of the
Business Register**

JULY 1993

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INTRODUCTION

The Business Register Division maintains a population register of Canadian businesses which includes information on their size, structure and type of business conducted. This register serves as the central frame from which Business, Trade and Employment programs of Statistics Canada conduct census and sample surveys. As the frame is a crucial component of the survey process, the purpose of this report is to provide insight into the quality of the information in the register.

The register was designed in accordance with business survey requirements and a fixed set of resources. For larger businesses, representing 80% of the economic activity, it was determined that very detailed information concerning the structure of the businesses was required. This was to ensure adequate survey frame coverage. For smaller businesses, representing the vast majority of the population but only 20% of the economic activity, considerably less detailed information was acceptable. This approach optimized the resource usage while having a marginal impact on survey frame coverage.

As a result of the design strategy, the frame is structured into three components. The first is the Integrated Portion (IP), representing some 119,000 establishments of large businesses in Canada. This portion of the frame contains details of the business operating units and the types of economic activities being conducted. The IP portion with its more complex business structure, is subject to continuous review as a result of ongoing survey processes. In addition, the largest 300 enterprises in Canada will be intensively reviewed over the course of the Large Enterprises Statistics Project. The second component is the Non-Integrated Portion (NIP), representing some 780,000 establishments of smaller businesses for which only basic information such as major type of business activity conducted and its geographical location is maintained. The third component is the unclassified portion, representing 17,000 potential establishments which are not yet in scope for business surveys. These are derived from administrative data sources and are awaiting classification.

The IP portion of the Register is subject to intensive maintenance activities as a result of survey feedback processes and the on-going business profiling activities. As a by-product of these activities, a range of quality measurements are available for the IP component of the Register. Accordingly, the aim of this study was to develop similar quality measurement information for the much larger NIP component of the Register. Quality measurements for the NIP should prove particularly useful to survey programs drawing samples from this segment of the business universe because it enables them to better evaluate potential error in their estimates.

This report presents the results of the November 1992 Quality Assurance survey of small (NIP) businesses. This sample survey was designed to measure the quality of key frame data. Results are intended to provide information which can be used by users of the frame to understand limitations and possibly for the refinement of survey estimates. Results obtained are also used within the Business Register Division to identify situations where action might be taken in order to improve the quality of the frame data.

HIGHLIGHTS

This is the third survey of quality of the non-integrated portion of the frame and the result continues to be very similar to those of the previous two iterations. For example, the estimate of the proportion of businesses in the NIP that are actually active businesses was 706,949 or 90.48% as opposed to 88.76% in June. Similarly, the estimate of the proportion of records correctly classified at the major group level was 93.98% as opposed to 91.35% in June. Undercoverage, the measure of unclassified units which belong in the NIP, remains at under 0.5% of the total NIP universe.

ALL INDUSTRY DIVISIONS

As of November 1992 there were 781,320 businesses listed in the Non-Integrated portion of the frame.

- Of these, 706,949 (90.48%) are estimated to be active. The activity status was at its lowest level in the "Logging and Forestry" (82.77%) and ranged to a high of (97.16%) in the "Real Estate Operators and Insurance Agents".
 - Of the active establishments, 91.32% are correctly classified to the level of industrial detail required by the economic survey programs.
 - The quality of the industrial classification for active establishments varied from a low of 69.14% in the "Finance and Insurance" to a high of 99.52% in the "Logging and Forestry".
 - 99.19% of the active establishments are assigned the correct Census Metropolitan Area/Census Agglomeration code.
 - Survey estimates showed no active establishments in the Non-Integrated portion are estimated to be duplicates of businesses listed in the Integrated Portion (or larger business segment) of the Business Register.
 - Overall, these results are (relatively) consistent with the findings of the June 1992 survey.

MANUFACTURING INDUSTRY

There are 44,361 manufacturing establishments listed in the non-integrated portion of the frame.

- 40,579 (91.47%) are active.
 - Of these, 85.97% had the correct SIC code.
 - 98.00% carry the correct Census Metropolitan Area / Census Agglomeration code.

WHOLESALE TRADE INDUSTRY

There are 43,119 wholesalers listed on the non-integrated portion of the frame.

- 38,679 establishments (89.70%) are active.
 - Of these, 89.31% have the correct SIC code.
 - 99.11% are classified to the correct Census Metropolitan Area / Census Agglomeration.

RETAIL TRADE INDUSTRY

There are 126,263 retailers listed in the non-integrated portion of the frame. This is a reduction of 149 records since the June 1992 study.

- 111,020 establishments (87.93%) are estimated to be active.
 - Of these, 93.59% have the correct SIC code.
 - 98.88% are classified to the correct Census Metropolitan Area / Census Agglomeration.

ACCOMMODATION, FOOD AND BEVERAGE INDUSTRY

There are 58,312 establishments listed in the non-integrated portion of the frame for the Accommodation, Food and Beverage Industry.

- 50,502 establishments (86.61 %) are active.
 - Of these, 95.08% have the correct SIC code.
 - 99.58% are classified to the correct Census Metropolitan Area / Census Agglomeration.

NOTES TO THE USERS

Gross Business Income / Number of Employees Tables

In the current report, the statistics are based on counts of units referring to both coverage and content. The methodology for producing estimates based on the Gross Business Income and the Number of Employees has been developed. While these new statistics are considered largely "experimental", they do provide some measure of the relative importance of the frame errors and their impact on users of the frame. For example, the estimated number of employees which belong to businesses missing from the frame due to non-classification is estimated to be less than 0.1 % of the total number of employees which belong to all businesses in the NIP. These tables are available on request.

Provincial Tables

These tables were distributed to Provincial focal points. For internal Statistics Canada users, these tables are available on request.

Future Intentions

Due to budgetary constraints the NIP QA survey has been suspended for fiscal year 1993-94. This should be viewed as a temporary situation as, hopefully, the survey will be re-established for the fiscal year 1994-95.

SUMMARY TABLES

All Industry Divisions

Population Size: 781,320		Sample Size: 5,960		Number of respondents in the sample: 5,724		
QUALITY OF COVERAGE		Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage
Category						
Active		706,949	90.48	88.63	92.33	0.01
Active & not Duplicates		706,949	90.48	88.63	92.33	0.01
Missing due to Unclassified Units		1501	0.19	0.17	0.21	0.05
Adjusted Population		708,450	90.67	88.82	92.52	0.01
QUALITY OF CONTENT		Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage
Category						
Standard Industrial Classification:						
Major Group		664,409	93.98	92.48	95.49	0.01
Industry Group *		645,949	91.37	89.02	93.72	0.01
Industry Class *		645,612	91.32	88.97	93.68	0.01
Standard Geographical Classification:						
Province		706,546	99.94	99.88	100.00	0.00
Census Metropolitan Area/Census Agglomeration		701,251	99.19	98.91	99.47	0.00
Administrative Information:						
Legal Name		613,260	86.75	84.09	89.40	0.02
Operating Name		605,023	85.58	83.71	87.45	0.01
Physical Location Postal Code		650,629	92.03	89.92	94.15	0.01
OVERALL FRAME QUALITY		617,971	87.41	84.84	89.98	0.02

* Definitions of the categories can be found in the *Concept and Methodology* Section.

Agriculture and Related Services

Population Size: 56,087		Sample Size: 427		Number of respondents in the sample: 422		
QUALITY OF COVERAGE		Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage
Active		50,443	89.94	87.07	92.80	0.02
Active & not Duplicates		50,443	89.94	87.07	92.80	0.02
Active & not Duplicates & Classified in right Division		47,622	84.91	81.51	88.30	0.02
Missing due to Unclassified Units		95	0.17	0.12	0.22	0.15
Missing due to Units Classified in wrong Division		470	0.84	0.19	1.48	0.39
Adjusted Population		48,187	85.91	82.46	89.37	0.02
QUALITY OF CONTENT		Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage
<i>Standard Industrial Classification:</i>						
Major Group		46,815	92.81	90.21	95.40	0.01
Industry Group *		46,815	92.81	90.21	95.40	0.01
Industry Class *		46,815	92.81	90.21	95.40	0.01
<i>Standard Geographical Classification:</i>						
Province		50,309	99.73	99.21	100.00	0.00
Census Metropolitan Area/Census Agglomeration		49,368	97.87	96.41	99.32	0.01
<i>Administrative Information:</i>						
Legal Name		43,322	85.88	82.40	89.37	0.02
Operating Name		40,634	80.55	76.61	84.50	0.02
Physical Location Postal Code		46,547	92.28	89.59	94.96	0.01
OVERALL FRAME QUALITY		44,262	87.75	84.46	91.03	0.02

* The Standard Industrial Classification was only validated to the major group.

Fishing and Trapping

Fishing and Trapping						
Population Size: 6,161		Sample Size: 139		Number of respondents in the sample: 139		
QUALITY OF COVERAGE		Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage
Active		5,268	85.51	79.73	91.28	0.03
Active & not Duplicates		5,268	85.51	79.73	91.28	0.03
Active & not Duplicates & Classified in right Division		4,553	73.90	66.78	81.02	0.05
Missing due to Unclassified Units		0	0.00	0.00	0.00	0.00
Missing due to Units Classified in wrong Division		116	1.88	0.00	5.51	0.98
Adjusted Population		4,669	75.78	67.79	83.77	0.05
QUALITY OF CONTENT		Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage
Standard Industrial Classification:						
Major Group		4,553	86.43	80.36	92.50	0.04
Industry Group *		4,553	86.43	80.36	92.50	0.04
Industry Class *		4,553	86.43	80.36	92.50	0.04
Standard Geographical Classification:						
Province		5,268	100.00	100.00	100.00	0.00
Census Metropolitan Area/Census Agglomeration		5,223	99.15	97.50	100.00	0.01
Administrative Information:						
Legal Name		4,508	85.57	79.35	91.79	0.04
Operating Name		4,597	87.26	81.35	93.17	0.03
Physical Location Postal Code		4,731	89.81	84.43	95.18	0.03
OVERALL FRAME QUALITY		4,061	77.09	69.72	84.46	0.05

* The Standard Industrial Classification was only validated to the major group.

Logging and Forestry

Population Size: 7,352		Sample Size: 233		Number of respondents in the sample: 227		
QUALITY OF COVERAGE		Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage
Active		6,085	82.77	49.48	100.00	0.21
Active & not Duplicates		6,085	82.77	49.48	100.00	0.21
Active & not Duplicates & Classified in right Division		6,056	82.37	49.09	100.00	0.21
Missing due to Unclassified Units		29	0.39	0.16	0.63	0.30
Missing due to Units Classified in wrong Division		448	6.09	0.00	12.37	0.53
Adjusted Population		6,533	88.86	54.99	100.00	0.19
QUALITY OF CONTENT		Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage
<i>Standard Industrial Classification:</i>						
Major Group		6,056	99.52	98.86	100.00	0.00
Industry Group		6,056	99.52	98.86	100.00	0.00
Industry Class *		6,056	99.52	98.86	100.00	0.00
<i>Standard Geographical Classification:</i>						
Province		6,085	100.00	100.00	100.00	0.00
Census Metropolitan Area/Census Agglomeration		6,063	99.64	99.14	100.00	0.00
<i>Administrative Information:</i>						
Legal Name		6,025	99.01	98.12	99.90	0.00
Operating Name		5,985	98.36	97.12	99.59	0.01
Physical Location Postal Code		6,035	99.18	98.33	100.00	0.00
OVERALL FRAME QUALITY		6,005	98.69	97.60	99.77	0.01

* The Standard Industrial Classification was validated to the industry group.

Mining, Quarries and Oil Wells

Population Size: 4,192		Sample Size: 167		Number of respondents in the sample: 160		
QUALITY OF COVERAGE		Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage
Active		3,758	89.65	82.51	96.78	0.04
Active & not Duplicates		3,758	89.65	82.51	96.78	0.04
Active & not Duplicates & Classified in right Division		3,310	78.96	70.55	87.37	0.05
Missing due to Unclassified Units		0	0.00	0.00	0.00	0.00
Missing due to Units Classified in wrong Division		186	4.44	0.00	10.48	0.69
Adjusted Population		3,496	83.40	73.04	93.75	0.06
QUALITY OF CONTENT		Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage
<i>Standard Industrial Classification:</i>						
Major Group		3,247	86.40	80.56	92.25	0.03
Industry Group		3,215	85.55	79.55	91.55	0.04
Industry Class *		3,215	85.55	79.55	91.55	0.04
<i>Standard Geographical Classification:</i>						
Province		3,757	99.97	99.97	99.98	0.00
Census Metropolitan Area/Census Agglomeration		3,722	99.04	97.41	100.00	0.01
<i>Administrative Information:</i>						
Legal Name		3,713	98.80	97.10	100.00	0.01
Operating Name		3,108	82.70	71.14	94.27	0.07
Physical Location Postal Code		3,598	95.74	92.19	99.29	0.02
OVERALL FRAME QUALITY		3,213	85.50	79.49	91.50	0.04

* The Standard Industrial Classification was validated to the industry group.

Manufacturing

Population Size: 44,361		Sample Size: 503		Number of respondents in the sample: 484		
QUALITY OF COVERAGE		Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage
Active		40,579	91.47	88.58	94.37	0.02
Active & not Duplicates		40,579	91.47	88.58	94.37	0.02
Active & not Duplicates & Classified in right Division		37,443	84.41	80.75	88.06	0.02
Missing due to Unclassified Units		128	0.29	0.16	0.42	0.23
Missing due to Units Classified in wrong Division		3,194	7.20	1.09	13.31	0.43
Adjusted Population		40,765	91.89	84.77	99.02	0.04
QUALITY OF CONTENT		Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage
Standard Industrial Classification:						
Major Group		35,942	88.57	85.28	91.87	0.02
Industry Group		34,886	85.97	82.47	89.47	0.02
Industry Class *		34,886	85.97	82.47	89.47	0.02
Standard Geographical Classification:						
Province		40,579	100.00	100.00	100.00	0.00
Census Metropolitan Area/Census Agglomeration		39,769	98.00	96.15	99.85	0.01
Administrative Information:						
Legal Name		35,875	88.41	84.77	92.05	0.02
Operating Name		35,833	88.30	85.16	91.44	0.02
Physical Location Postal Code		37,306	91.93	88.98	94.88	0.02
OVERALL FRAME QUALITY		34,652	85.39	81.71	89.07	0.02

* The Standard Industrial Classification was validated to the industry group.

Construction

Population Size: 100,810		Sample Size: 616		Number of respondents in the sample: 595		
QUALITY OF COVERAGE		Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage
Active		91,167	90.43	86.04	94.83	0.02
Active & not Duplicates		91,167	90.43	86.04	94.83	0.02
Active & not Duplicates & Classified in right Division		87,951	87.24	82.35	92.13	0.03
Missing due to Unclassified Units		281	0.28	0.20	0.36	0.15
Missing due to Units Classified in wrong Division		8,429	8.36	0.00	18.13	0.60
Adjusted Population		96,661	95.88	84.96	100.00	0.06
QUALITY OF CONTENT		Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage
Category						
Standard Industrial Classification:						
Major Group		86,286	94.65	91.37	97.93	0.02
Industry Group		83,194	91.25	85.40	97.11	0.03
Industry Class *		83,194	91.25	85.40	97.11	0.03
Standard Geographical Classification:						
Province		91,167	100.00	100.00	100.00	0.00
Census Metropolitan Area/Census Agglomeration		90,557	99.33	98.17	100.00	0.01
Administrative Information:						
Legal Name		80,046	87.80	80.66	94.94	0.04
Operating Name		77,669	85.19	78.71	91.68	0.04
Physical Location Postal Code		86,105	94.45	92.26	96.64	0.01
OVERALL FRAME QUALITY		83,013	91.06	87.38	94.73	0.02

* The Standard Industrial Classification was validated to the industry group.

Transportation and Storage

Population Size: 30,441		Sample Size: 290		Number of respondents in the sample: 285		
QUALITY OF COVERAGE		Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage
Active		26,176	85.99	68.42	100.00	0.10
Active & not Duplicates		26,176	85.99	68.42	100.00	0.10
Active & not Duplicates & Classified in right Division		25,348	83.27	65.66	100.00	0.11
Missing due to Unclassified Units		51	0.17	0.10	0.24	0.22
Missing due to Units Classified in wrong Division		1,403	4.61	0.50	8.72	0.45
Adjusted Population		26,802	88.05	69.96	100.00	0.10
QUALITY OF CONTENT		Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage
<i>Standard Industrial Classification:</i>						
Major Group		25,348	96.84	94.98	98.70	0.01
Industry Group		24,852	94.94	92.64	97.25	0.01
Industry Class *		24,852	94.94	92.64	97.25	0.01
<i>Standard Geographical Classification:</i>						
Province		26,176	100.00	100.00	100.00	0.00
Census Metropolitan Area/Census Agglomeration		26,013	99.38	98.52	100.00	0.00
<i>Administrative Information:</i>						
Legal Name		23,530	89.89	83.00	96.78	0.04
Operating Name		22,215	84.87	76.38	93.36	0.05
Physical Location Postal Code		23,120	88.33	82.66	93.99	0.03
OVERALL FRAME QUALITY		22,454	85.78	80.00	91.56	0.03

* The Standard Industrial Classification was validated to the industry group.

Communication and Other Utilities

Population Size: 3,944		Sample Size: 182		Number of respondents in the sample: 173		
QUALITY OF COVERAGE		Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage
Active		3,309	83.90	74.70	93.10	0.06
Active & not Duplicates		3,309	83.90	74.70	93.10	0.06
Active & not Duplicates & Classified in right Division		2,992	75.86	66.40	85.32	0.06
Missing due to Unclassified Units		8	0.20	0.00	0.45	0.63
Missing due to Units Classified in wrong Division		167	4.23	0.00	9.91	0.68
Adjusted Population		3,167	80.30	69.27	91.33	0.07
QUALITY OF CONTENT		Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage
<i>Standard Industrial Classification:</i>						
Major Group		2,992	90.42	87.20	93.64	0.02
Industry Group		2,971	89.79	86.35	93.22	0.02
Industry Class *		2,971	89.79	86.35	93.22	0.02
<i>Standard Geographical Classification:</i>						
Province		3,309	100.00	100.00	100.00	0.00
Census Metropolitan Area/Census Agglomeration		3,288	99.37	98.14	100.00	0.01
<i>Administrative Information:</i>						
Legal Name		2,863	86.52	83.53	89.52	0.02
Operating Name		2,758	83.35	79.31	87.39	0.02
Physical Location Postal Code		2,862	86.49	83.49	89.49	0.02
OVERALL FRAME QUALITY		2,562	77.43	72.90	81.95	0.03

* The Standard Industrial Classification was validated to the industry group.

Wholesale Trade

Population Size: 43,119		Sample Size: 364		Number of respondents in the sample: 342		
QUALITY OF COVERAGE		Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage
Active		38,679	89.70	83.15	96.25	0.04
Active & not Duplicates		38,679	89.70	83.15	96.25	0.04
Active & not Duplicates & Classified in right Division		36,000	83.49	76.63	90.35	0.04
Missing due to Unclassified Units		86	0.20	0.13	0.27	0.17
Missing due to Units Classified in wrong Division		2,667	6.19	3.65	8.72	0.21
Adjusted Population		38,753	89.87	82.56	97.19	0.04
QUALITY OF CONTENT		Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage
<i>Standard Industrial Classification:</i>						
Major Group		34,889	90.20	87.04	93.36	0.02
Industry Group		34,546	89.31	86.04	92.59	0.02
Industry Class *(501)		34,546	89.31	86.04	92.59	0.02
<i>Standard Geographical Classification:</i>						
Province		38,679	100.00	100.00	100.00	0.00
Census Metropolitan Area/Census Agglomeration		38,335	99.11	98.11	100.00	0.01
<i>Administrative Information:</i>						
Legal Name		35,504	91.79	88.23	95.35	0.02
Operating Name		34,604	89.46	85.88	93.05	0.02
Physical Location Postal Code		35,772	92.48	88.97	95.99	0.02
OVERALL FRAME QUALITY		33,437	86.45	82.26	90.63	0.02

* The Standard Industrial Classification was validated to the industry group except for group "501" which was done to the class level.

Retail Trade

Population Size: 126,263		Sample Size: 608		Number of respondents in the sample: 588		
QUALITY OF COVERAGE		Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage
Active		111,020	87.93	81.93	93.93	0.03
Active & not Duplicates		111,020	87.93	81.93	93.93	0.03
Active & not Duplicates & Classified in right Division		107,505	85.14	78.83	91.46	0.04
Missing due to Unclassified Units		241	0.19	0.14	0.24	0.14
Missing due to Units Classified in wrong Division		2,052	1.63	0.90	2.35	0.23
Adjusted Population		109,798	86.96	80.60	93.32	0.04
QUALITY OF CONTENT		Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage
Standard Industrial Classification:						
Major Group		106,432	95.87	93.34	98.39	0.01
Industry Group		103,899	93.59	90.69	96.48	0.02
Industry Class * (601)		103,899	93.59	90.69	96.48	0.02
Standard Geographical Classification:						
Province		110,754	99.76	99.43	100.00	0.00
Census Metropolitan Area/Census Agglomeration		109,773	98.88	98.01	99.74	0.00
Administrative Information:						
Legal Name		96,035	86.50	82.22	90.78	0.03
Operating Name		88,354	79.58	75.00	84.17	0.03
Physical Location Postal Code		103,507	93.23	88.90	97.57	0.02
OVERALL FRAME QUALITY		100,391	90.43	85.50	95.35	0.03

* The Standard Industrial Classification was validated to the industry group except for group "6501" which was done to the class level.

Finance and Insurance						
Population Size: 22,303	Sample Size: 205		Number of respondents in the sample: 201			
QUALITY OF COVERAGE	Category	Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage
Active		20,289	90.97	61.53	100.00	0.17
Active & not Duplicates		20,289	90.97	61.53	100.00	0.17
Active & not Duplicates & Classified in right Division		14,547	65.22	43.78	86.67	0.17
Missing due to Unclassified Units		62	0.28	0.16	0.39	0.21
Missing due to Units Classified in wrong Division		6,389	28.65	5.88	51.42	0.41
Adjusted Population		20,998	94.15	62.87	100.00	0.17
QUALITY OF CONTENT	Category	Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage
<i>Standard Industrial Classification:</i>						
Major Group		14,269	70.33	37.99	100.00	0.23
Industry Group		14,028	69.14	36.75	100.00	0.24
Industry Class *		14,028	69.14	36.75	100.00	0.24
<i>Standard Geographical Classification:</i>						
Province		20,289	100.00	100.00	100.00	0.00
Census Metropolitan Area/Census Agglomeration		20,242	99.77	99.32	100.00	0.00
<i>Administrative Information:</i>						
Legal Name		17,607	86.78	54.70	100.00	0.19
Operating Name		19,488	96.05	93.44	98.66	0.01
Physical Location Postal Code		19,627	96.74	94.86	98.61	0.01
OVERALL FRAME QUALITY						
		13,902	68.52	36.12	100.00	0.24

* The Standard Industrial Classification was validated to the industry group only.

Real Estate Operators and Insurance Agents

Population Size: 32,835		Sample Size: 232		Number of respondents in the sample: 217		
QUALITY OF COVERAGE		Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage
Active		31,902	97.16	91.63	100.00	0.03
Active & not Duplicates		31,902	97.16	91.63	100.00	0.03
Active & not Duplicates & Classified in right Division		27,617	84.11	65.32	100.00	0.11
Missing due to Unclassified Units		53	0.16	0.09	0.23	0.22
Missing due to Units Classified in wrong Division		2,311	7.04	2.21	11.87	0.35
Adjusted Population		29,981	91.31	71.91	100.00	0.11
QUALITY OF CONTENT		Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage
<i>Standard Industrial Classification:</i>						
Major Group		27,569	86.42	68.67	100.00	0.10
Industry Group		27,569	86.42	68.67	100.00	0.10
Industry Class *		27,569	86.42	68.67	100.00	0.10
<i>Standard Geographical Classification:</i>						
Province		31,902	100.00	100.00	100.00	0.00
Census Metropolitan Area/Census Agglomeration		31,902	100.00	100.00	100.00	0.00
<i>Administrative Information:</i>						
Legal Name		31,374	98.34	97.42	99.27	0.00
Operating Name		29,563	92.67	82.79	100.00	0.05
Physical Location Postal Code		31,202	97.81	96.60	99.01	0.01
OVERALL FRAME QUALITY		27,012	84.67	66.89	100.00	0.11

* The Standard Industrial Classification was validated to the industry group only.

Business Services						
Population Size: 76,539	Sample Size: 406		Number of respondents in the sample: 384			
QUALITY OF COVERAGE	Category	Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage
Active		71,338	93.20	89.18	97.23	0.02
Active & not Duplicates		71,338	93.20	89.18	97.23	0.02
Active & not Duplicates & Classified in right Division		68,462	89.45	83.96	94.93	0.03
Missing due to Unclassified Units		135	0.18	0.11	0.24	0.19
Missing due to Units Classified in wrong Division		3,231	4.22	0.00	8.86	0.56
Adjusted Population		71,828	93.84	86.66	100.00	0.04
QUALITY OF CONTENT	Category	Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage
<i>Standard Industrial Classification:</i>						
Major Group		68,462	95.97	91.83	100.00	0.02
Industry Group		66,831	93.68	89.22	98.14	0.02
Industry Class *		66,831	93.68	89.22	98.14	0.02
<i>Standard Geographical Classification:</i>						
Province		71,338	100.00	100.00	100.00	0.00
Census Metropolitan Area/Census Agglomeration		71,264	99.90	99.69	100.00	0.00
<i>Administrative Information:</i>						
Legal Name		61,300	85.93	76.98	94.88	0.05
Operating Name		66,367	93.03	86.90	99.16	0.03
Physical Location Postal Code		65,177	91.36	84.40	98.33	0.04
OVERALL FRAME QUALITY		62,301	87.33	79.23	95.43	0.05

* The Standard Industrial Classification was validated to the industry group only.

Government Services *

Population Size: 118		Sample Size: 30		Number of respondents in the sample: 30		
QUALITY OF COVERAGE		Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage
Active		114	96.61	90.86	100.00	0.03
Active & not Duplicates		114	96.61	90.86	100.00	0.03
Active & not Duplicates & Classified in right Division		102	86.44	76.00	96.88	0.06
Missing due to Unclassified Units		0	0.00	0.00	0.00	0.00
Missing due to Units Classified in wrong Division		0	0.00	0.00	0.00	0.00
Adjusted Population		102	86.44	76.00	96.88	0.06
QUALITY OF CONTENT		Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage
<i>Standard Industrial Classification:</i>						
Major Group		102	89.47	79.83	99.12	0.05
Industry Group		102	89.47	79.83	99.12	0.05
Industry Class		102	89.47	79.83	99.12	0.05
<i>Standard Geographical Classification:</i>						
Province		114	100.00	100.00	100.00	0.00
Census Metropolitan Area/Census Agglomeration		114	100.00	100.00	100.00	0.00
<i>Administrative Information:</i>						
Legal Name		114	100.00	100.00	100.00	0.00
Operating Name		106	92.98	84.84	100.00	0.04
Physical Location Postal Code		90	78.95	66.84	91.05	0.08
OVERALL FRAME QUALITY		82	71.93	59.27	84.59	0.09

* The Standard Industrial Classification was only validated for the major group "84 - International and Other Extra-Territorial Agencies".

Educational Services *

Population Size: 5,776		Sample Size: 197		Number of respondents in the sample: 191		
QUALITY OF COVERAGE		Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage
Active		5,398	93.46	89.56	97.35	0.02
Active & not Duplicates		5,398	93.46	89.56	97.35	0.02
Active & not Duplicates & Classified in right Division		4,931	85.37	79.83	90.91	0.03
Missing due to Unclassified Units		8	0.14	0.00	0.31	0.63
Missing due to Units Classified in wrong Division		219	3.79	0.00	9.14	0.72
Adjusted Population		5,158	89.30	81.60	97.00	0.04
QUALITY OF CONTENT		Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage
<i>Standard Industrial Classification:</i>						
Major Group		4,931	91.35	86.75	95.95	0.03
Industry Group		4,717	87.38	82.04	92.73	0.03
Industry Class		4,717	87.38	82.04	92.73	0.03
<i>Standard Geographical Classification:</i>						
Province		5,398	100.00	100.00	100.00	0.00
Census Metropolitan Area/Census Agglomeration		5,359	99.28	97.89	100.00	0.01
<i>Administrative Information:</i>						
Legal Name		4,336	80.33	74.57	86.08	0.04
Operating Name		4,571	84.68	78.99	90.37	0.03
Physical Location Postal Code		4,928	91.29	86.77	95.82	0.03
OVERALL FRAME QUALITY		4,462	82.66	76.61	88.71	0.04

* The Standard Industrial Classification was only validated at the industry group. The population excludes all elementary, secondary, post-secondary, university and any other educational institutions operated by the governments.

Health and Social Services *

Population Size: 63,513		Sample Size: 286		Number of respondents in the sample: 276		
QUALITY OF COVERAGE		Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage
Active		61,235	96.41	92.88	99.94	0.02
Active & not Duplicates		61,235	96.41	92.88	99.94	0.02
Active & not Duplicates & Classified in right Division		60,902	95.89	92.33	99.45	0.02
Missing due to Unclassified Units		87	0.14	0.05	0.23	0.34
Missing due to Units Classified in wrong Division		1,104	1.74	0.73	2.75	0.30
Adjusted Population		62,093	97.76	94.06	100.00	0.02
QUALITY OF CONTENT		Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage
<i>Standard Industrial Classification:</i>						
Major Group		60,902	99.46	98.94	99.97	0.00
Industry Group		54,229	88.56	69.43	100.00	0.11
Industry Class		54,229	88.56	69.43	100.00	0.11
<i>Standard Geographical Classification:</i>						
Province		61,235	100.00	100.00	100.00	0.00
Census Metropolitan Area/Census Agglomeration		60,988	99.60	99.15	100.00	0.00
<i>Administrative Information:</i>						
Legal Name		49,736	81.22	61.89	100.00	0.12
Operating Name		58,401	95.37	92.58	98.16	0.01
Physical Location Postal Code		52,455	85.66	66.35	100.00	0.12
OVERALL FRAME QUALITY		52,121	85.12	65.79	100.00	0.12

* The Standard Industrial Classification was validated to the industry group only. The population excludes all public hospitals and any other institutions that are part of the I.P.

Accommodation, Food and Beverage Services

Population Size: 58,312		Sample Size: 387		Number of respondents in the sample: 357		
QUALITY OF COVERAGE		Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage
Active		50,502	86.61	80.08	93.14	0.04
Active & not Duplicates		50,502	86.61	80.08	93.14	0.04
Active & not Duplicates & Classified in right Division		48,872	83.81	76.37	91.25	0.05
Missing due to Unclassified Units		97	0.17	0.09	0.24	0.23
Missing due to Units Classified in wrong Division		1,290	2.21	0.90	3.53	0.30
Adjusted Population		50,259	86.19	78.63	93.75	0.04
QUALITY OF CONTENT		Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage
<i>Standard Industrial Classification:</i>						
Major Group		48,735	96.50	91.63	100.00	0.03
Industry Group		48,353	95.74	90.79	100.00	0.03
Industry Class * (921)		48,016	95.08	90.08	100.00	0.03
<i>Standard Geographical Classification:</i>						
Province		50,502	100.00	100.00	100.00	0.00
Census Metropolitan Area/Census Agglomeration		50,290	99.58	99.10	100.00	0.00
<i>Administrative Information:</i>						
Legal Name		40,416	80.03	68.55	91.51	0.07
Operating Name		39,298	77.81	66.46	89.17	0.07
Physical Location Postal Code		46,695	92.46	85.26	99.67	0.04
OVERALL FRAME QUALITY		45,066	89.24	80.56	97.91	0.05

* The Standard Industrial Classification was validated to the industry group except for group "921" which was done to the class level.

Other Services

Population Size: 99,194		Sample Size: 688		Number of respondents in the sample: 653		
QUALITY OF COVERAGE		Estimated Count	Estimated Percentage of Population	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Count & Percentage
Active		89,688	90.42	87.31	93.52	0.02
Active & not Duplicates		89,688	90.42	87.31	93.52	0.02
Active & not Duplicates & Classified in right Division		87,533	88.24	84.95	91.54	0.02
Missing due to Unclassified Units		141	0.14	0.07	0.21	0.24
Missing due to Units Classified in wrong Division		1,529	1.54	0.78	2.30	0.25
Adjusted Population		89,203	89.93	86.55	93.31	0.02
QUALITY OF CONTENT		Estimated Count	Estimated Percentage of Active Units	Lower Bound of 95% C.I. for Estimated Percentage	Upper Bound of 95% C.I. for Estimated Percentage	Coefficient of Variation for Estimated Percentage
<i>Standard Industrial Classification:</i>						
Major Group		86,880	96.87	95.42	98.32	0.01
Industry Group		85,135	94.92	92.74	97.10	0.01
Industry Class *		85,135	94.92	92.74	97.10	0.01
<i>Standard Geographical Classification:</i>						
Province		89,686	100.00	100.00	100.00	0.00
Census Metropolitan Area/Census Agglomeration		88,980	99.21	98.55	99.88	0.00
<i>Administrative Information:</i>						
Legal Name		76,956	85.80	80.87	90.74	0.03
Operating Name		71,472	79.69	72.95	86.43	0.04
Physical Location Postal Code		80,873	90.17	86.51	93.84	0.02
OVERALL FRAME QUALITY		78,973	88.05	84.29	91.82	0.02

* The Standard Industrial Classification was validated to the industry group only.

1. CONCEPTS

1.1 Business Register

The **Business Register (BR)** is a list frame for both annual and sub-annual business surveys at Statistics Canada. The main data sources are two administrative files from Revenue Canada Taxation (RCT): the **Tax returns** of corporations and individuals, and the **Payroll Deduction (PD)** Accounts. All employers in Canada must have a PD Account in order to remit monies for Pension Plans, Unemployment Insurance, and Personal Income Tax. In the following paragraphs, the BR concepts are presented from the point of view of its use by sub-annual economic surveys.

Only some of the units on the BR are accessible to economic surveys. The accessible units have complete Standard Industrial Classification (SIC) and Standard Geographical Classification (SGC) codes, and are in-scope for economic surveys. These accessible units can be divided into two sets of businesses. First the complex or large businesses, with a revenue above specific thresholds defined by industry division and province, are called the **Integrated Portion (IP)** units. They are labelled as IP units because their structure is recorded with a linked set of legal, operating and administrative records. The second set of accessible units (with a revenue below the thresholds) includes the small businesses which are referred to as the **Non-Integrated Portion (NIP)** units. For these NIP units, the BR makes use of only the PD Account data as a source. The accessible units are available to economic surveys via the **Statistical List**, which contains the data necessary for sub-annual survey sampling, frame delineation and construction.

The inaccessible BR units, called ZIP, are either out-of-scope (OOS) units, called **ZIP-OOS**, or in-scope but not completely classified (called **ZIP-Unclassified**). The latter are units for which complete Standard Industrial Classification (SIC) or Standard Geographical Classification (SGC) codes are not known.

The ZIP-OOS units are: PD Accounts without remittances in the last thirteen months, household accounts, foreign accounts, accounts owned by businesses which have ceased their economic activities, government special work program accounts, pension plan accounts, or accounts used to solve a succession ("estate of").

The statistics included in this report provide an evaluation of the quality of the Non-Integrated Portion of the Business Register as provided by the Statistical List and the NIP PD Account list.

1.2 Industrial Classification

The industrial classification used in this report is based on the 1980 version of the Standard Industrial Classification (SIC). A description of the various industries and groups of industries is contained in the "Standard Industrial Classification Manual", Catalogue 12-501. The SIC uses 4 digits to code business activities. Four digits identify an Industry Class, the first three digits define Industry Groups, and the first two digits designate a Major Group. The Major Groups are combined to form eighteen Industry Divisions, as listed below :

- A. Agriculture and Related Services
- B. Fishing and Trapping
- C. Logging and Forestry
- D. Mining, Quarries and Oil Wells
- E. Manufacturing
- F. Construction
- G. Transportation and Storage
- H. Communication and Other Utilities
- I. Wholesale Trade
- J. Retail Trade
- K. Finance and Insurance
- L. Real Estate Operators and Insurance Agents
- M. Business Services
- N. Government Services
- O. Educational Services
- P. Health and Social Services
- Q. Accommodation, Food, and Beverage Services
- R. Other Services

There are some industries which are out-of-scope for this report either because they are not currently part of any statistical program or because they are covered in the IP only. These exclusions are:

1. Private Households (Industry Class 9741), and
2. Federal, Provincial, and Local Government Services (Major Groups 81, 82 and 83, respectively)

1.3 Frame Quality

This report provides statistics for two major categories of quality : **coverage** and **content**.

1.3.1 Quality of Coverage

This section covers the quality associated with the assignment of a unit to a survey population. The categories for which estimates are reported in this document are defined below.

1. Active

This category includes NIP units confirmed as carrying on business activity.

2. Active and not duplicate

This category includes active NIP units not duplicated or already represented as an IP unit.

3. Active and not duplicate and classified in the right industry division

This category includes active and not duplicate units in NIP which are correctly classified to the proper industry division.

4. Missing due to Unclassified Units

A ZIP-unclassified unit is missing in the NIP because of the processing time lag associated with classifying PD Accounts.

5. Missing due to Industry Misclassification

A NIP unit is missing from one Industry Division because it's SIC was wrongly coded to another Industry Division.

6. Adjusted Population

This number represents a corrected number of NIP records that would exist if there were no coverage errors and thus these would meet the selection criteria for survey samples. It is the union of categories 3., 4. and 5. defined immediately above.

1.3.2 Quality of Content

This section covers the quality associated with one or more data elements of a NIP unit. The different categories used in this report are defined below.

1.3.2.1 Categories for Statistical List data items:

STANDARD INDUSTRIAL CLASSIFICATION

The STANDARD INDUSTRIAL CLASSIFICATIONS quality results were measured at the levels established acceptable to survey criteria. However, the summary tables may be a combination of 2, 3 and 4 digit industrial classification under the heading of a major industrial group.

1. Major Group

This category includes the units which have the correct value in the first two digits of their 1980 SIC code.

2. Industry Group

This category includes the units which have the correct value in the first, second and third digit of their 1980 SIC code.

3. Industry Class

This category includes the units which have the correct value in all four digits of their 1980 SIC code.

STANDARD GEOGRAPHICAL CLASSIFICATION

4. Province Code

This category includes the units which have been assigned to the correct province using the province code portion of their SGC. The SGC is obtained by applying the postal code to SGC concordance table to the unit's postal code.

5. Census Metropolitan Area / Census Agglomeration

This category includes the units which have been assigned to the correct Census Metropolitan Area and Census Agglomeration.

1.3.2.2 Categories for PD Account list data items:

ADMINISTRATIVE INFORMATION

6. Legal Name

This category includes the units which have the correct legal name.

7. Operating Name

This category includes the units which have the correct operating name.

8. Location postal code

This category includes the units which have the correct postal code for the location of their economic activity.

OVERALL FRAME QUALITY

This indicator is an addition to this report. It is designed to measure the quality of the records rather than each content element. It is based on the premise that a record is correct if the **Postal Code** and **Standard Industrial Classification** permit the collection of pertinent survey data.

2. DATA RELIABILITY

2.1 Sampling Errors

A measure of the sampling error in this report is the **95% confidence interval** for the percentage. That interval is calculated using the estimate of percentage itself and the square root of its estimated variance. According to the theory that is the basis for its construction, it has a 95% chance of containing the true value. The greater the estimated sampling error, the wider the interval.

The second measure used in this report is the **coefficient of variation**. This is the ratio of the square root of the estimated variance of an estimate over the estimate itself. The more sampling errors there are, the larger the coefficient of variation.

The 95% confidence interval and coefficient of variation appear in all tables of content and coverage errors.

2.2 Non Sampling Errors

2.2.1 Definition

Non-sampling errors are due to other reasons than sampling. Some of the non-sampling errors that happen at certain stages of the survey process that led to producing this report are as follows.

a) Sampling frame

A small percentage of the NIP units are not eligible for contact. Since pro-rating is used to provide estimates for these units, an attempt is made to reduce the non-coverage error introduced in the statistics. The remaining errors are due to any shortcomings of the pro-rating.

b) **Data collection**

At the data collection stage there are many possible errors: the interviewer may misread questions, misunderstand the answer, or mis-code the SIC. The respondent may misunderstand the question, or answer the question incorrectly. Interviewers may be unable to contact a business (complete non-response), or some information may be difficult to obtain (partial non-response) i.e. PD account numbers. This may cause the estimate of duplication to be understated.

c) **Data capture and Head Office processing**

Keying errors may occur in the capture of a response and during the manual updating of the CFDB. For the latter stage, SIC coding errors may also occur.

2.2.2 Measures

Non-response and undercoverage may result in a bias in the results if the non-respondents are not similar to the respondents. Measures of complete non-response and non-coverage rates are given in Tables A, B, and C of this document. The three non-response categories and the non-coverage category used in the tables are defined below.

2.2.2.1 Non Contact

A unit is a non-contact if the business respondent could not be contacted during the data collection time period.

2.2.2.2 Refusal

A unit is a refusal if the contacted business respondent refused to give answers.

2.2.2.3 Unprocessed

A unit is unprocessed if the business respondent was contacted and gave answers to questions, but the results of the contact had not been processed and therefore not used at the time of estimation.

2.2.2.4 Undercoverage

Undercoverage is a count of units that were not eligible to be contacted.

Table A presents the sample counts of non-response for the NIP. For each count, the percentage of the units is given. Note that the total NIP sample size was 5960.

**TABLE A: NON-RESPONSE AND NON COVERAGE
COUNTS FOR THE NIP SAMPLE**

TYPE OF NON-RESPONSE	TOTAL COUNT	PERCENT OF TOTAL
Non-Contacts	211	3.54
Refusals	21	0.35
Unprocessed	4	0.07
Total Non-response	236	3.96

Table B presents non-response counts and percentages for the ZIP units.

TABLE B: NON-RESPONSE COUNTS FOR THE ZIP

	POPN SIZE	# OF NO RES	% OF NO RES
ZIP TOTAL	11,828	243	2.05

Table C contains the weighted non-response estimated percentage for the NIP population. The total estimated percentage presented in the table can be interpreted as an upper bound for the possible bias in the estimates of this report. Obviously, 0% is the lower bound.

Note that the undercoverage number should not be subject to estimation error, as they are the sum of the strata sizes where no sample was drawn.

Each estimate is presented as a percentage of the entire NIP population, along with the 95% confidence interval for the estimate, and its coefficient of variation.

**TABLE C: WEIGHTED NON-RESPONSE AND UNDERCOVERAGE
PERCENTAGES FOR THE NIP**

Estimate of Non- Response	Estimated Percent	Lower 95% Confidence Bound	Upper 95% Confidence Bound	Coefficient of Variation
Non Contacts	6.68	5.12	8.24	0.12
Refusals	0.50	0.12	0.87	0.38
Unprocessed	0.05	0.00	0.09	0.53
Non-Response Subtotal	7.22	5.62	8.82	0.11
Undercoverage	9.02	0.00	0.00	0.00
TOTAL	16.25	14.65	17.85	0.05

